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THE AMERICAN JOURNAL OF CLINICAL MEDICINE

Editorial Cabinet

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As to Taking Medical Journals

NO MODERN physician thinks of attempting to practice his calling without a well-stocked and carefully chosen library of textbooks, to which he adds, from time to time, as his means will allow. And we hope, in the course of the next month or two, to have something helpful to say to our readers in this connection. But medicine is such a rapidly moving science that every passing week, every day almost, changes the face of the medical map, and no textbook can, in the nature of things, represent the true status of medical knowledge, even up to the time of its publication. For, between the time of its writing and that of its publication, a whole mass of new information has flooded the arena, and much of the older matter has become practically obsolete.

The medical periodical, on the other hand, is medical history in the making. It is to the medical man exactly what the newspaper is to the business man. It represents the live, dynamic progress of medicine in the making, and that at first hand. The wonderful facilities of communication now obtaining enable the journal to present to its readers all that is "doing" in medicine and in surgery, in every part of the world, accurately, quickly, conveniently, so that by its agency the busy practitioner on the frontier is kept in close and constant touch with the centers of experiment and research. If, then, this doctor can not afford to be without textbooks, still less can he afford to get along without reading a number of the best professional periodicals of the day.

Nor is there any reason why he should be without them. The same facilities of civilization which make possible the gathering of information make it also possible to disseminate the same at a cost to the reader that is little more than nominal. Almost any of the monthly medical journals may be had for a dollar or two a year; so that for the modest outlay of, say, five dollars a year a physician may have three, four or five of these up to date magazines come to his desk regularly each month, and that without any further trouble to himself than the mere act of ordering and remitting for them.

Certainly, there is not a practitioner making a living at all but can, and ought to, devote five dollars a year to supplying himself with the live news of his own calling. Most physicians should, indeed, invest twice that sum in this very important part of their equipment; but at least the smaller amount should be regarded as a legitimate item of current expense. This insignificant outlay will repay itself over and over again, with the possibility, often, of proving the means of carrying him to success through a perplexing and difficult situation—and inevitable gain in his standing in the community. The reading doctor is the successful doctor. Like "old wine" he grows better as he grows older. He is the man who is looked up to, respected and employed.

What better habit, then, to take on, at this, the beginning of a new year, than the habit of subscribing regularly for half a dozen good live medical journals—of which, of

course, THE AMERICAN JOURNAL OF CLINICAL MEDICINE should be one?

A man's compensation should be made up of two parts until he is fifty years of age. He should say to himself when considering employment—what can I earn; and next put the letter L before earn and ask, What can I learn?—Hugh Chalmers.

WHY YOU SHOULD READ "CLINICAL MEDICINE"

There still are some physicians in the country who are laboring under the mistaken impression that CLINICAL MEDICINE is "published for profit" only and conducting a commercial propaganda in a certain class of remedies largely used by physicians. That there may be no misconception, we confess freely—eagerly, indeed—our interest in the active principles. We have advocated the use of the active principles in the past. We shall continue to advocate them in the future. We believe in them. We want others to believe in them. But we deny that our journal has no other purpose than to get you to employ this kind of drugs—any kind, for that matter. We are eager for every doctor in this country to appreciate fully something of our ideals, and to learn what we are trying to accomplish.

It is for this reason that we are sending copies of this issue to some thousands of doctors who are not now subscribers. This editorial is intended especially for them—for you—and we ask as a special favor that you read it carefully, and then go through the entire journal from beginning to end, to see what we are actually doing, and to get something of the spirit of the publication.

First of all, it should be understood that CLINICAL MEDICINE is primarily a therapeutic journal. In that field we believe we stand at the head, or very near it. We are sparing no expense nor effort to give in its pages full reports of the latest and best accomplished in therapy the world over. These reports are not mere clippings from other journals; they are careful digests, made by men who can present the "new things" in their proper proportion, with special reference to the interests of the general practitioner. We receive all the leading English, French, German, Austrian, and other foreign journals, purchase the important books published abroad, and try to cull from them *the things which you can use.*

After this, we invite our subscribers to try these things—the new things and the old ones presented in new ways—and give their experiences for publication. Our pages are replete with these reports; and, coming from busy men like yourselves, we know that they fit into the emergencies such as you are compelled to grapple with.

Every real therapeutic advance, no matter where made or by whom, is mirrored in these pages. Thus, for instance, are you fully familiar with all of these topics, to name only a few:

Koranyi's benzol treatment of leukemia;

The use of salvarsan in pernicious anemia and pernicious malaria;

Curle's intensive iodine treatment of tuberculosis;

Rogers' emetine treatment of amebic dysentery;

What is being done with radium, thorium, and other radioactive substances;

Besredka's sensitized vaccines;

The bacterin treatment of scarlet-fever, whooping-cough, and typhoid fever;

McCarrison's new method of treating goiter with intestinal antiseptics;

The focal treatment of chronic arthritis—which is making it possible to cure the "incurable?"

These and hundreds of other therapeutic advances of similar import are discussed in CLINICAL MEDICINE just as soon as reliable information can be secured concerning them. In this department alone we publish material enough to make a 200-page book every year—for which you will pay $2.00 when you buy it in some year-book after the ideas are a year or more old!

Take the laboratory research-work. What wonders are being accomplished in this field! Murphy says that internal medicine is the great opportunity for the doctor of the future. We give it to you in CLINICAL MEDICINE, boiled down, in language that you can understand. You want to know how Abderhalden can diagnose cancer or pregnancy by examining the blood? What Crile means by "anoci-association?" About Noguchi's discovery of the germ of rabies? Also, how he proved that paresis of the insane is actually due to syphilis? You will find it all in these pages.

But most important is the kind of stuff that will help you cure Molly's acne and Johnny's urethritis. Others are curing these cases. Others are having better success than you in typhoid fever, pneumonia, rheumatism, both acute and chronic, and in the simple surgical ailments. You do not feel quite sure of yourself, possibly, in some of the obstetrical difficulties, and you would like to

add to your money-making capacity, by taking up a little "specialty" work. In helping you in this great field—in prying open for you just a little—but, every month—the door of opportunity we find our greatest pleasure. For instance—

Can you get a better man than G. Frank Lydston to tell you how to treat syphilis or to solve for you the problem of male impotence?

Is there any one who can help you more with the problems of sex than W. J. Robinson?

Would you not enjoy a series of papers on the common skin diseases by a master like E. A. Fischkin?

Aren't you anxious to read B. G. R. Williams' stories of the clinical laboratory, in which he tells you what findings mean *in terms of treatment?*

Furthermore, we know of no one who treats of obstetrical problems from the standpoint of the everyday physician better than William Rittenhouse; who can help you more in "Everyday Surgery" than Benjamin H. Breakstone; give you more real practical pointers in the "Medical Emergencies" than George H. Candler; or relate the vivid practical experiences of a country surgeon with more real insight and enthusiasm than Ralph St. J. Perry.

We do not claim to have been the first journal to talk about the business interests of the doctor. But we have been doing this for twenty—going on twenty-one—years; and this year we are going to put more thought into it than ever before.

We are arranging with good men, such as Maynard A. Austin, to tell you how to get better work out of yourself; Henry B. Hollen will go to the heart of the problem of fees and collections; and we shall have symposia from the many for the exchange of helpful business experiences. Then, Thomas G. Atkinson will give you a course of the fitting of spectacles; and we have arranged with Mr. Arthur H. Busch, a Chicago architect, to draw for us a series of careful, artistic plans for doctors' houses, offices, and a small hospital. There will be a symposium on this topic also.

Now—here is a part of our program for the year. Does it appeal to you? Doesn't it seem to you that you *must* have CLINICAL MEDICINE this year? Go through this number; realize that there are even better ones coming; and we hope that your hesitation will disappear—that we may count you at last among our great family of readers, from so many of whom we hear almost every day: "Don't stop THE CLINIC. Of all the journals I take—and I take many—it is *the* one that is indispensable."

It is better to touch a star and die a pauper than to wallow in the dirt with millions.—John P. Altgeld.

STUDIES IN OLD AGE: DIGESTION

I wonder whether the future that I picture to myself will not tell us that senility is synonymous with acidity. If age is characterized by a superabundance of lime where it should not be, is there not a corresponding dissociation of acids whereby the lime is liberated?

Take any of the ill-chances to which age is like—overexertion, overeating, fecal retention, exposure and the result is an attack, rheumatic or rheumatoid, with a ready development of acidity. Soda is the old man's friend; and the reason why vichy maintains its hold on the affections of so many notables is, that with every year they learn more to appreciate the value of its natric equivalent.

Of the four causes of rheumatic attacks above named, I am inclined to look upon the third as the underlying cause, the others acting simply as "the last straw." The decline of peristalsis is inevitable; the decline in digestion, however, is rarely attended by a corresponding decrease in the intake of food; clogging of the bowels follows imperfect digestion and the victim acknowledges "the approach of age."

Masticate the food thoroughly and insalivate it until the starches begin to sweeten in the mouth. No teeth? Get a set; or, remember that mastication is only useful as a means of securing insalivation; so, if you must "gum it," hold the soft food in your mouth until it sweetens. Don't bolt your food or wash it down.

Use only hot beverages with meals. Stick to coffee as long as it agrees. When you can omit your morning cup without discomfort, it is time to quit it. Then nothing answers quite so well as oatmeal gruel. Don't sweeten it, unless with a little malt extract; better add salt and butter, also cinnamon.

Only very little albumin—but always some. Your body needs heat-giving materials—sugars and fats—but not much nitrogen. Soups usually are relished and in cool weather form the best form of food for the aged.

Always, daily, a proportion of fresh, living vegetable protoplasm and acid—fruit juices, not preserved but freshly pressed from ripe

fruit. Lacking these, the citrus fruits are a resource, indeed, and in grapefruit we have a refreshing tonic drink of value. Cut a hole in one end, squeeze out the juice and drink it, then fill the shell with water and let it stand until the next mealtime or until you are thirsty. You will soon acquire a taste for the pure bitter infusion.

Eat when hungry; stop the moment appetite is satisfied, even if you have to eject what is in your mouth. If you are not hungry for breakfast, take a glass of warm milk, and if you go without discomfort till noon, be sure you needed no more. That same glass of warm milk at bedtime often affords a good night's rest—or drop seven granules of avenoid in a glass of hot water and drink that after you are in bed. The sense of well being next morning is something notable.

The man who at sixty has learned to manage his digestive apparatus has added ten happy years to his life.

Does everybody know these things? I believe they do—but do they practice them? I trow not.

The tendency to go on eating whatever comes before one, to eat until full, is universal, is primitive, is incurable.

And, so, we die; and the mourners go to God's acre; and our widows set their caps for another victim; and our sons start in to have a good time now that old "tightwad" is out of the way; and our daughters—well, mourning is *so* becoming!

One of the features of old age we shall not try to explain is, that in trouble a man not infrequently turns to his friends rather than to his family. When the Home for Aged Couples opened with a grand flourish in Philadelphia, the whole show came near smashing, because there were no aged couples who wanted to live together! Old man and old woman had had about enough of each other. He found her mean, stingy, petty, caring more for her furniture than for his comfort; snooping about with a lot of old hens whose cackling annoyed him. She found him careless of himself, smelly of tobacco, not nice in his habits or talk, bringing dirt and noise in with him. Besides, each asserted the other snored!

So she betook herself to the Old Woman's Home, where she found congenial company, could knit and gossip, and keep her patches and other treasures undisturbed.

He went to the fraternity house, where he foregathered with others like unto himself, swapped yarns, bragged of early prowess, and had a committee from the lodge come every week to see if he was happy or wanted anything, and to keep him in tobacco.

It is not so romantic as the story of the aged couple going down the last path hand in hand, but our name is Truthful James, and we are bound to acknowledge that more often than we care to admit Darby prefers the lodge home and Joan has outlived her youthful dreams. As Messinger says:

"Old friends to talk!—
Ay, bring those chosen few,
The wise, the courtly, and the true,
So rarely found;
Him for my wine, him for my stud,
Him for my easel, distich, bud,
In mountain walk!
Bring Walter good:
With soulful Fred; and learned Will,
And thee, my alter ego (dearer still
For every mood).
These add a bouquet to my wine!
These add a sparkle to my pine!
If these I tine,
Can books, or fire, or wine be good?"

Smile, and the world smiles with you. "Knock," and there's no one at home. The man with a grin and a plan to begin, goes where the knocker's not known. Smile, and the world smiles with you. Growl, and the way looks dark. There's many a man who can, and he can, without "cranking" so much, if he'd spark.

—The Silent Partner.

A PRACTICAL TALK ON THE UTERINE DRUGS

There is a group of vegetable remedies the uses of which originally were made known by the Eclectics. From them they went into the hands of that much-abused class, the manufacturers, who in turn presented them to the medical profession at large in the guise of proprietaries. Yes, we know how you feel at the mention of that word—proprietary and Beelzebub being strictly synonymous. However, if you are a reasoning being, let us ask your consideration of this proposition:

These proprietaries are presented to the medical profession as medicines, with a statement as to the uses for which they are recommended. Who is the judge of the merits of a medicinal agent, if not the doctor? And, if each of these remedies presented to the medical profession has succeeded so well that a flourishing business has been built upon it, what is the inference? If the remedy is not a true one, then the medical profession is too ignorant and unskilled in its own activities to detect the fraud! Then the people who desert us for quacks and pretenders are right, and we as honest men ought to quit practice and go into some other line of work.

The *reductio ad absurdum!* The medical profession is not imbecile and impotent. On the contrary, when thousands of us declare we have found a remedy useful in a certain line of ailments, we may safely believe this to be so, and then wait till the pharmacologists tell us why and how the remedy operates.

Among the remedies referred to several are credited with specific action on the female reproductive apparatus. In this group we may place helonias, aletris, viburnum, caulophyllum, and mitchella. Dioscorea also is placed here by some, but it really belongs in another category. This latter plant has decided value in combating the affections of the biliary passages, but we have not found reason for grouping it with the uterines, except as a remover of the causes of reflex irritations.

Turning to the early writers on these native plants, we find them credited, apparently, with antagonistic properties. One and all they are pronounced useful for amenorrhea, dysmenorrhea, and menorrhagia. But how can one and the same remedy increase the menstrual flow and decrease it, how quiet an excited womb and stimulate a sluggish one?

Well, why not? In dealing with the sick, we have a vital and individual problem before us, not a chemical and general one. An existing endometritis may occasion divers symptoms in different women; for the one is full-blooded, the other anemic; the one is fully developed, the other puerile. Still, we believe that there are differences in the action of these closely allied remedies that render each one better fitted for certain differing pathologic manifestations.

For some years we have studied this matter and endeavored to make clinical tests, the results here detailed being the outcome. We are by no means presenting our conclusion as positive, but merely the tentative views indicated by early trials, to guide our many colleagues who may see fit to put them to a test. Thereafter we may find reason for modifying our ideas as suggested by the reports received.

It is unfortunate that the earlier experimenters saw fit to use the ancient shotgun principle, commingling all these remedies in one heterogenous complex and administering such a combination for every possible disorder of the female reproductive apparatus presented. Little real knowledge could be gained by such methods: one never knew which of the ingredients did the work. Administering each remedy alone, we get some definite idea of its powers and applicability.

Helonias seems the best of the group for dysmenorrhea. Begin its administration two days before the expected menstruation, and it is almost certain that it then will not be painful. Even in those *per*acute forms where the suffering has induced the morphine-habit, the relief from helonias has been so decided that the patient could not deny it, being forced to forego this excuse for indulgence in the narcotic.

Aletris is the remedy for menorrhagia. Give it in the same manner, beginning two or three days before menstruation and keeping the patient in bed until the flow has ceased for two days. The following month and at each successive term thereafter a day may be lopped off the bed-staying period, until well within the year the patient merely will have to take the rest every woman ought to take when menstruating.

Senecio is our best remedy for amenorrhea; and in this our own experience is fortified by the weighty authority of William Murrell, the therapeutist of Westminister. Small doses of this agent should be taken at bedtime during the intermenstrual period, to be increased during the menstrual week to three doses daily. This also is a remedy to be continued for the better part of a year.

Caulophyllum is distinctively the remedy for after-pains; and in the establishment of this tenet our friend Dr. George H. Candler has had no little part. It is one of the most satisfactory remedies at our commend for the special service it seems to have been designed to render.

Viburnum is the one really effective remedy to prevent threatened abortion. Leave out the syphilitics, where the treatment is too specific to be questioned, and we have no other drug more positive in its results. So, whenever abortion is threatened, go to work and saturate the patient with viburnum prunifolium until the uterus quiets down and behaves itself. In the cases of women where repeated abortions have occurred, put the patient to bed two days before the menstrual period, and keep her there under the influence of viburnum for a full week.

Mitchella repens we have to dismiss—we have as yet found no occasion for its employment. Passiflora has no specific mission upon the uterine organs, but it is a valuable nervous sedative.

For all these remedies the rule holds good that, to secure the best results, we must resort to the small and frequent dose. When administering senecio or other remedies during the intermenstrual period, we give one dose at bedtime, invariably dissolved in

hot water. During the acute period or menstrual week, give still smaller doses, also in hot water, every three, two, one or one-half hour, according to the need; increasing the frequency, but not the size, of the dose as the symptoms are crescent, decreasing the frequency as they wane.

Our preference is for the purified extracts, or concentrations, in granule form. Very good liquid preparations are to be had—very good when they leave the makers—but the conditions are peculiar. These are not ordinary cases. One may have to carry his remedy for a long time before he needs it, but when he does need it he needs it badly and must have it in full strength. Then to find a cork loose and the fluid escaped or decomposed is apt to induce profanity and, worse, breed therapeutic skepticism. The granules are effective when made, and remain effective even after years.

Fill a little case with a supply of these remedies, label it "Uterines," and stick it into your satchel. Of course, you will provide a supply of those matchless antispasmodic drugs, glonoin, atropine and strychnine, for use separately or combined.

With these remedies you have the means of relieving most of the female pains, without resort to opiates—and what that means you know as well as we.

The women are the true conservators of the race. The men are the wastrels, the adventure-lovers and gamblers, and in the end it is by their women they are saved.
—Jack London.

THE FUTURE OF INTERNAL MEDICINE

Our friend and Nestor, Dr. John B. Murphy, has more than once within the last few years given unmistakable evidence, in his public utterances, of being a good deal of a seer and prophet. No more conspicuous instance of the distinguished surgeon's insight and foresight is to be found than his significant declaration before the recent Congress of American Surgeons that the future of medical science and practice lies, not in surgery, but in internal medicine.

"If you were to ask me," he said, "whether, if I were to start in to study medicine today, I should take medicine or surgery, I should tell you without hesitation that I should start in internal medicine. The advance of internal medicine in the next quarter of a century will be enormously greater than that in surgery. Internal medicine has enormously more possibilities than surgery has. It is internal medicine that goes into details, makes a careful examination, and analyzes, and endeavors to arrive at a diagnosis."

Significant and prophetic words, indeed, especially as uttered before a congress of surgeons! In effect, they serve notice on the surgeon that his day is almost run, that his influence upon medicine well-nigh has reached its limit, and that from this time on every step in advance in medical science will set the surgical indicator back a little nearer to vanishing point. And, in fact, it required no great degree of prescience or second sight on Doctor Murphy's part to make this prognostication, but only a keen discernment of the signs of the times, a mind alert to read the handwriting on the wall. He might, with equal justification, have declared that "the advance of internal medicine in the past ten years has been enormously greater than that in surgery."

The marvelous, almost revolutionary, achievements wrought within the past decade in immunity and biologic therapeutics alone eclipse all the achievements of surgery put together in the same period; and the end is not yet. In diagnostics, the advance has been almost, if not quite, as phenomenal; so that even surgery itself owes a large degree of what progress it has experienced to the diagnostic aid it has borrowed from internal medicine.

And, for the future, the far-reaching work that is now being done by Abderhalden and his school promises to usher in an era of medical science which bids fair to rival, perhaps to surpass, that which Pasteur and Ehrlich inaugurated in the last century.

But no doubt the fundamental factor in insuring the future supremacy of the internist over the surgeon consists in the significant fact that medicine is moving, surely and rapidly, toward the goal of prevention. And the surgeon's proper art hardly can be said to have any place in the real prevention of disease. At best, its preventive influence can not extend beyond the heading of certain ailments in the individual, by removing or modifying the physical *fons et origo*.

Such a preventive office can be exercised only toward an individual, and then only after the beginnings of disease have found a lodgment in the body. It can have no perceptible effect upon the health of a community or of a generation, and but little influence upon the biologic aspects of disease even in the individual.

It may be freely granted that surgery is a useful measure in the checking of certain disease-processes in the patient, serving to

prolong his life of health and comfort to an otherwise impossible length. To this extent, it may be allowed a place in preventive medicine. And to the same extent, a similar role may be conceded to every curative phase of medicine.

But in the essential conception of preventive medicine surgery not only plays no part at all, but is, in many ways, a positive hindrance to it—especially to individual prevention—since the very ease and impunity with which surgical operations are performed serve to discourage what otherwise would be imperative efforts in the direction of etiology and prophylaxis.

In its technical sense, in fine, surgery has to do with the cure of local diseases or injuries, by means which are equally local; and such an art manifestly can have no inherent place in a system of medicine the object of which is to prevent the occurrence of disease.

This outlook of internal medicine and this frank acknowledgment of it from one of the high priests in the temple of surgery ought to be a source of great inspiration and encouragement to the physician, who for years has been passively accustomed to see the honors and the golden rewards of the profession flow steadily into the coffers of the surgeon. He may hope in a very short time to share, at least equally, in these distinctions and emoluments.

It is no extravagance whatever, we believe, to predict that by the time the generation of men who are now in their earlier years of studentship come into the prime of their professional careers the tide will have set in the other direction altogether, and the internist will rank, both in prestige and in remuneration, as far ahead of the surgeon as the surgeon now supersedes the physician.

And here is another complaint I bring against John Barleycorn. It is these good fellows that he gets—the fellows with the fire and go in them, who have bigness, and warmness, and the best of the human weaknesses. And John Barleycorn puts out the fire, and soddens the agility, and, when he does not more immediately kill them or make maniacs of them, he coarsens and grossens them, twists and malforms them out of the original goodness and fineness of their natures.

—Jack London.

THAT SCHOOL-ROOM PEST: THE HEAD LOUSE

Some months ago we published several short communications concerning methods of destroying that incessant foe of the schoolma'am, the head-louse. As a means of combating this nuisance, one of our correspondents recommended the free application of hair-oil; one of the editorial staff spoke a word in favor of tincture of larkspur; and still another urged applications of kerosene. We are pleased to learn from an authority that can be depended upon, if extent and variety of experience are any guide, that all three of the agents mentioned are useful in these cases; that is, up to a certain point. Dr. Joseph Sobel, who is connected with the Department of Health of the City of New York, and who contributes to *The New York Medical Journal* an article upon this topic, is the source of our information.

To dispose of the matter of treatment first, we may, cite from the "instructions to parents" provided by the New York Board of Health and given in Doctor Sobel's article, the advice, to saturate the hair with a mixture of equal parts of kerosene and olive-oil, after which the head is to be covered for six to eight hours with a rubber cap or a large towel. The statement is also made that tincture of larkspur may be used instead of the oil mixture; the directions for use being the same. The instructions conclude with this note: "Nits: If the head is shampooed regularly each week, as above described, it will cure and prevent the condition of 'nits.'"

Now, a "crop of lice" undoubtedly is a very humble and perhaps a vulgar topic for an editorial, but that it is an important one Doctor Sobel certainly can prove to the satisfaction of anyone who will read his article.

The louse is ubiquitous, ceaseless in his activities, and apparently blessed with immunity to all efforts to destroy him. Most other school diseases are disappearing; very slowly in some cases, to be sure, but, nevertheless, shrinking in numbers from year to year. There is less ringworm, conjunctivitis, trachoma, scabies, favus, and other such communicable affections of the eyes and skin; yet, the percentage of pediculosis is practically at a standstill, and these cases vastly outnumber all the rest.

During the last four years, there have been from 150,000 to 185,000 cases of pediculosis capitis in the New York public schools—or from 22 to 23 percent of the total enrollment. In 1912, the last year reported, there were 802,837 children in the schools of Greater New York, and of these 184,907 suffered from the ravages of the head-louse.

In spite of the optimistic statement as to the annihilability of the nits, voiced in the official circular just cited, Doctor Sobel expresses a pessimism which seems justified by the preceding statistics. He quotes with an

air of approval and almost resignation the statement of the principal of one school, that "the inspector may come and the nurse may go, but the nits seem to increase forever."

When we consider that "a single female pediculus will have five thousand descendants in eight weeks," and bearing in mind that thousands of these children come from homes which run the whole gamut from simple dirt to inexpressible filth, where other members of the family from grandmother to the baby, and bedding, clothing, and everything else harbor lice in uncountable numbers, and where this condition not only is thought normal but even desirable, then something of the difficulties of keeping these "live stock" out of the schools can be realized.

Nor is the removal of the nits as simple a matter as the official instructions would lead one to believe. As Doctor Sobel forcibly puts it:

"After many years of experimentation with any number of drugs, I am of the opinion that there is but one successful way of removing the nits—other than cutting the hair—and that is by mechanical means. Patient, persistent, painstaking removal of the nits, strand by strand, with the hand, sandpaper, or a fine-toothed comb is the only successful plan for pronounced cases. The various drugs may loosen a few nits, but the majority will succumb only to forcible eviction. This is something that must be taught, explained, and shown to the patient."

In other words, while our kerosene or larkspur will destroy the lice, they will not prevent the recurrence of new crops from the multitude of unhatched "eggs." To accomplish this, we must attack the hairy scalp with vigor and intelligence; must keep at it day after day; and must seek cooperation in homes where ignorance is self-sufficient bliss and simple cleanliness a thing undreamed of. No wonder Doctor Sobel strikes a pessimistic note. No wonder, also, that he has a word of praise for the American negro, who, whatever his faults, keeps his children relatively more free from lice than his white brethren of the slums.

The problem of the head-louse is not confined to New York. Wherever there is a large alien population this filthy parasite furnishes a problem. Consult the long-suffering young woman who teaches in the public school, and she will tell you something of her struggles to keep *your* children's heads free from this foreign invasion. Why not help her all you can, not so much by free advice as to kerosene and larkspur, as by joining with other good people who are battling with the problem of the slums?

I am very optimistic about the future. There is bound to be a revolution sometime. There is bound to be a weeding out of the unnecessary, a rejection of the faults, an acceptance and acknowledgment of that which is true.—Finley Ellingwood. The revolution is already going on. The new therapy is already knocking at our doors. The true is even now coming into its own!

THE AMERICAN COLLEGE OF SURGEONS

Between the extravagant enthusiasm of the advocates and fellows of the newly organized College of Surgeons, on the one hand, and the violent denunciations of its opponents and outsiders, on the other hand, how shall the innocent bystander arrive at a just estimate of its motives and methods and probable effects? The secretary of the College declares that the difference of attitude represents the difference in viewpoint of those who are on the inside looking out, and those who are on the outside looking in. And it may possibly be true that a certain proportion of the bitterness of the outsider is, in fact, the bitterness of sour grapes.

Still, the rather ill-chosen remark of the secretary raises the suspicion that, after all, there may be some ground for resentment. At all events, it is clear that, so long as these extreme sentiments between the two factions prevail, it is useless to look to either of them for a fair and impartial characterization of the new enterprise. One must make his own observations and draw his own conclusions.

As to motives, let us assume that they are of the best; not, as the secretary of the College puts it, "the prevention of legalized murder by incompetent surgeons," but rather the stimulation of efficiency and the raising of standards and the promotion of interests among surgeons.

Very well, these are indeed legitimate and praiseworthy objects. However, it may reasonably be doubted whether in these days there is any particular need for an organization of this character for such purposes. One is inclined to think that never in the history of medicine was there *less* need for such a movement. It would seem that the practice of surgery is already amply hedged about with provisions and stipulations, both educational and legislative, which scarcely are in need of any stimulation or addition at this time. There is such a thing as organizing and legislating to death.

Granting, however, the desirability of an organization of the character and for the purposes set forth in the constitution of the College, it hardly strikes the impartial observer that the methods employed by the founders are calculated to further the ends in view. If the ostensible aims of the College are its real aims, it is certainly going about it in a very peculiar way to carry them out.

The negation and destruction of that professional and scientific democracy under which American surgery has made such wonderful growth that it now leads the world; the incitement of bitter class-jealousies and hard feelings among those who are equally entitled to encouragement and honor; the crushing of endeavor and the blighting of ambition in younger and less-known surgeons, by setting arbitrary caste limitations upon their field of effort and achievement; these hardly seem to the disinterested spectator the very best means that could be devised for stimulating efficiency and raising the standards of surgical science and practice. Indeed, it looks to this writer as though the American College of Surgeons, in its present form and under its present operation, is a step backward rather than forward in the development of surgery in this country.

A few paragraphs back we suggested that there did not appear to be any special need for such an undertaking at this time. Even if we eliminate from the manifesto of the secretary of the College the disagreeable suggestion that lurks in it, we still are inclined to the opinion that his declaration expresses the real informing motive of the movement.

There is a feeling among the "elect" of American surgery—partly genuine, no doubt, and partly interested—that there is altogether too much surgery being done by the average man, the general practitioner. We rather think that would be frankly admitted by the founders and fellows of the new College as its real underlying animus, if one could get any frank expression from them at all. And, if, as seems to be the corollary of the proposition in the minds of the founders, this widespread practice of surgery which has developed in the last ten or twenty years were in the main incompetent surgery, then it would constitute a very legitimate, and even urgent, ground for action.

But a very casual consideration of the facts will convince any reasonable person that such is not the case. On the contrary, this class of surgery, on the whole, is remarkably competent surgery. There never was a time in the history of medicine when the young graduate was going out into practice with such an adequate preparation for doing surgical work as he is now. He is, in fact, ten times more fitted to practice surgery than to practice medicine.

The impetus which the influence and achievements of these very men who are now founding the College of Surgeons has given to surgery during the past decade or two has invested surgery with such towering importance and surrounded it with such large financial rewards that it has altogether eclipsed medicine in the college curriculum. Furthermore, the steadily increasing rigor of educational requirements has insured to the student more and more exacting preparation, including, in most cases, a final year or two of actual clinical work as hospital interne.

So it is that the graduate of today, if he possess only the average degree of intelligence and aptitude for his work, leaves school at about the same stage of efficiency and experience which formerly it took two or three years of outside practice to attain—to say nothing of the superiority he gains from constantly advancing standards in surgery at large.

Hence, it appears to us a most inopportune time for the secretary of the College to be talking about "stopping legalized murder at the hands of incompetent surgeons." And, furthermore, as we have previously hinted, all this splendid diffusion of efficiency and general raising of surgical standards throughout the profession at large has come about as the result of the magnificent system of professional democracy that has always prevailed in this country.

Now, to destroy this democratic system by a weak imitation of English institutions (about as weak and foolish, by the way, as that of the New York fop who imagines that an eye-glass and a cane and turned-up trousers constitute an imitation of British aristocracy) is to turn the hands of the surgical dial backward, rather than forward. We should not be surprised if it marks, even though it may not perceptibly constitute, the point of arrest in the development of American surgery.

Perhaps—tell it not in Gath, whisper it not in the streets of Askelon—perhaps this is the real thought in the minds of the founders of the College. Perhaps they have read the handwriting on the wall, that the days of surgery are numbered; that its natural limitations have been reached, and that this, in conjunction with the thorough surgical training of the medical graduate, is destined to make the surgery of the future a mere

incidental tool in the hand of the medical man; and—who knows—this College movement is a last frantic stand, to catch the fleeting moments as they fly.

THE ADVERTISING DOCTOR

A western town has ten physicians, all graduates of colleges of approved merit, and men of repute as citizens and in their profession. The community has no poor, and few working-men: a town of retired farmers and the men who collect at the county-seat—which means a superior degree of culture.

To this town comes for two days every month an advertising doctor, whose picture with a column of his claims ornaments the local paper each week.

The settled physicians are fairly busy, but not one has more than half of his time occupied professionally. During the days the traveling man is there, his rooms are crowded, and he takes in more money than any two of the local men collect in a month.

Very naturally, the local doctors do not like this. They designate the traveler as a quack, and get wrathy when he is mentioned.

What is the difficulty?

There are two ways of considering this question.

The usual method is, to call the intruder names and denounce everybody who does not similarly abuse him. The one certain result of this is to create sympathy for the abused man in the minds of the laity.

The other method is to examine the case dispassionately, get at the causes, and see whether a remedy may be advised.

I expect some of the more violent ones will accuse the writer of favoring the advertiser, because said writer takes this second course. But, surely, a general should not be blamed if he seeks to spy out his opponent and fathom his plans.

Let us hear what plea the advertiser puts up for himself. Here is his statement:

"I am a graduate of a regular medical college, an A-plus *cum laude*. I am a sober, normal, God-fearing man. I read my Bible from cover to cover, and nowhere do I find the commandment, 'Thou shalt not advertise.' But I do find, 'Thou shalt not steal' and 'Thou shalt not bear false witness.' I have never taken from any man a dollar I did not honestly earn. I never performed or advised an unnecessary operation nor gave any kind of treatment for the sake of the money only. I have patients here I have treated for sixteen years, and still hold them. I take and read more medical journals than all ten of the town doctors together. I never lose a chance of improving my methods, and if I cure cases they can not it is because I try the new methods which they neglect. I stand by every word of my ads and will pay any man $500.00 who will show a promise I do not make good. I advertise the truth."

To get a sideview of the case, I talk with some of the leading citizens. They corroborate the advertiser's statements. He has refused to treat one of the wealthiest citizens, telling him bluntly he needed no treatment, his trouble being that he ate too much. He sent a penniless patient to a city specialist, paying the fees himself, the case being beyond his own skill.

I ask about the other doctors, and am informed that they seize every opportunity to rush a patient off to the city for operations, dividing with the surgeon the fees he received.

"They don't try to cure people any more," is a common complaint. "Doc Ad takes the cases in which they fail, and cures them. He beats them out of their boots at their own game."

Only one of the town doctors use the active principles, and he is the busiest of the ten. And, yet, I happened to know that a firm of manufacturing pharmacists has refused to sell its products to the advertiser, turning down an order for a half million granules, because it would not aid him against the regular profession.

There is his case. Consider it. That he has transgressed a vital principle of the code of ethics is certain, and God forbid that I or this journal should countenance this or anything that tends to lower our standards; and stealing, cheating, destroying the confidence of trusting patients for the sake of money are among these.

I am not assuming that the charges mentioned are true; but I do say that many persons in such a community believe them to be true. True or false, I indict the medical profession for having allowed such a belief to become prevalent, even if it be false. The honor of the profession has not been upheld by those whose duty it was to uphold it.

As for this advertiser, "Let him among you who is without sin cast the first stone."

I do say this, without fear of contradiction, that if the family physician would study his cases, utilize the modern scientific methods of laboratory diagnosis without throwing away his own knowledge, and apply the improved methods and weapons of modern therapeutics, he would have nothing to fear from any traveling advertiser.

In other and plain words, if, with all the advantages the man always on the ground has, he lets any occasional sojourner beat him out of his boots in his own town, it is his own fault and he does not deserve a particle of sympathy. Dull stupidity, that will not learn, but pulls back mulishly whenever you try to lead him to his oats, will always be beaten by the shrewd, alert, up-to-date charlatan.

I am in sympathy with every honest effort to rid the community of quackery, and newspapers like *The Chicago Tribune*, which is driving from town the harpies who defraud and deceive, deserve our commendation and support. Yet, after all, the best defense against quackery is honest, skilful, result-bringing service. Medical inefficiency is the charlatan's opportunity.

It may be that you cannot stay
To lend a friendly hand to him
Who stumbles on the slippery way,
Pressed by conditions hard and grim;
It may be that you dare not heed
His call for help, because you lack
The strength to lift him—but, you need
Not push him back.

S. E. Kiser.

TWENTY-FIFTH ANNIVERSARY OF THE PASTEUR INSTITUTE

Upon November 14, 1888, President Carnot officially opened the Pasteur Institute in Paris. Upon November 18, 1913, the twenty-fifth anniversary of the founding of this institution was celebrated, and again the head of the republic—President Poincaré—was present, carrying to this now historic institution the greetings of the French nation. He placed a wreath upon the tomb of Pasteur, which is located in the main building of the Institute, while Doctor Roux, the present director, delivered an address in which he told something of the history of the institution.

The Pasteur Institute was built with money raised by popular subscription, entirely independent of the state and free from all political connections; the large sum of more than $500,000.00 being thus obtained to defray the expense of its foundation. Twenty-five years ago Pasteur himself was still living and took charge of its research-work. He passed away in 1895, and many of his earlier associates, men like Duclaux, Chamberland, Binot, not to name others, also are gone. Those at present at the head of the institution are Roux and Metchnikoff, both men whose position in the scientific world is the very highest.

The Pasteur Institute was the first—and it probably remains the greatest—of research-institutes. It may almost be said that laboratory investigation in medicine began in the Pasteur Institute, just as bacteriology itself began with the work of its founder, Louis Pasteur.

Since its foundation, many changes have taken place in the Institute. It has greatly expanded, so that now there are two buildings instead of one. The staff has increased in number and includes some of the most brilliant men in the world of science: we need but mention the names of Roux and Metchnikoff, Laveran, Calmette, Bordet, Martin, Dujardin-Beaumetz, Besredka, Mesnil, Levaditi, and Charpentier; and these are only a few of the research-workers identified with its history and who are still directing its activities.

Many of the greatest discoveries in the history of medicine were made by these men. While it was Pasteur's own work in discovering a cure for rabies which led to its organization, it was not long before this institution embraced in its studies all the problems of medicine. Thus, for instance, Roux divides with Behring the honor of the discovery of diphtheria antitoxin. Metchnikoff's work on immunity, especially on phagocytosis, takes rank with that of Ehrlich. At the Pasteur Institute epoch-making studies have been conducted on the plague bacillus, on the microbe of pleuropneumonia, the prevention of syphilis, on poliomyelitis, dysentery, malaria, sleeping-sickness, and surra in animals.

Also, the Institute has sent out thousands of students who have taken its educational courses and carried its ideals and enthusiasm to all the corners of the world. To give only one instance: two thousand men have followed the course in microbiology founded by Roux; and others the courses in biologic chemistry, in clinical biology, in yeasts and enzymes, and hygiene. The Institute also maintains a hospital with eighty beds, in order to have opportunity for determining clinically the value of the laboratory researches made within its walls. In the antirabic department alone, more than 34,000 patients have been treated, and branches for administering this treatment are maintained in every large city in the world. The Institute is also engaged in the manufacture of serums, which are supplied to the French army and to the department of public health.

The greatest service of Louis Pasteur and

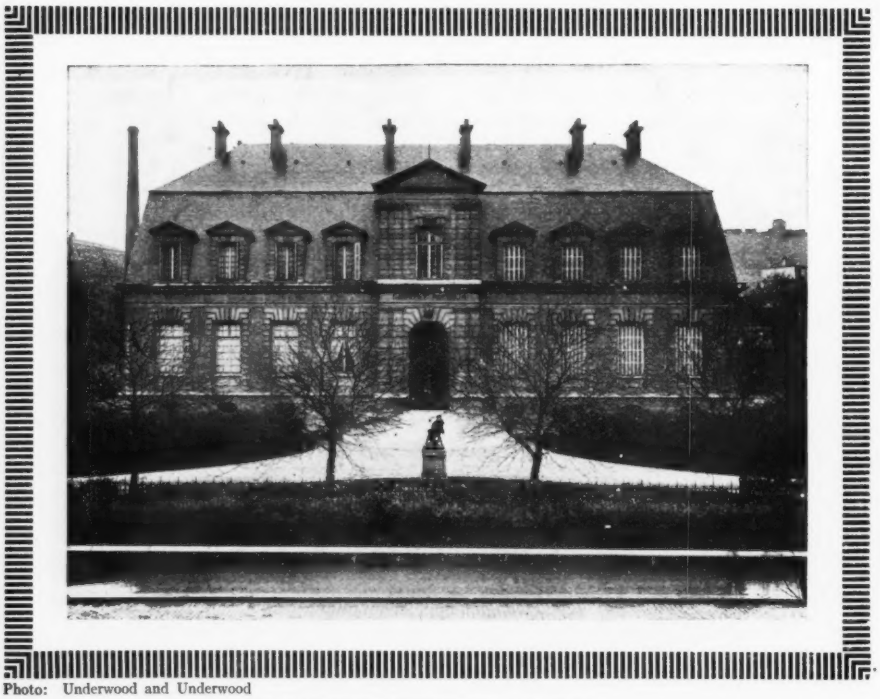


Photo: Underwood and Underwood

THE PASTEUR INSTITUTE, PARIS

This institution was founded by Pasteur twenty-five years ago. It celebrated this anniversary on November 18, 1913, Professor Roux giving the address

of the Institute which he founded, however, has been pointed out by a writer in the *Paris Medical*. Through this man and his work the science of medicine has been revolutionized within the last twenty-five years. The progress of medicine can be accomplished only by the combination of the laboratory with the hospital. The more we have of laboratories in the hospital, and the more we have of workers in the laboratories, the more rapidly shall we succeed in finding solutions for the great problems of disease.

Upon the inauguration of the Institute, in 1888, Pasteur closed his oration with the following words, which seem peculiarly significant in the light of the history of the last few years and the promise of the future:

"Two opposing laws seem to me now in contest. The one, a law of blood and death, opening out each day new modes of destruction, forces nations to be always ready for the battle. The other, a law of peace, work, and health, the only aim of which is to deliver man from the calamities which beset him. The one seeks violent conquests, the other, the relief of mankind. The one places a single life above all victories, the other sacrifices hundreds of thousands of lives to the ambition of a single individual. The law, of which we are the instruments, strives even through the carnage to cure the wounds due to the law of war. Treatment by our antiseptic methods may preserve the lives of thousands of soldiers. Which of these two laws will prevail, God only knows. But of this we may be sure, that science, in obeying the law of humanity, will always labor to enlarge the frontiers of life."

THREE DISTINGUISHED EUROPEANS

Chicago has been honored, during 1913, by the visits of a number of distinguished English medical men. Of these, none has attracted more interest than Sir Rickman John Godlee, of London, the president of the Royal College of Surgeons, who, in November, came to this city to deliver the inaugural address upon the occasion of the establishment of the American College of Surgeons.

Photo: Underwood and Underwood

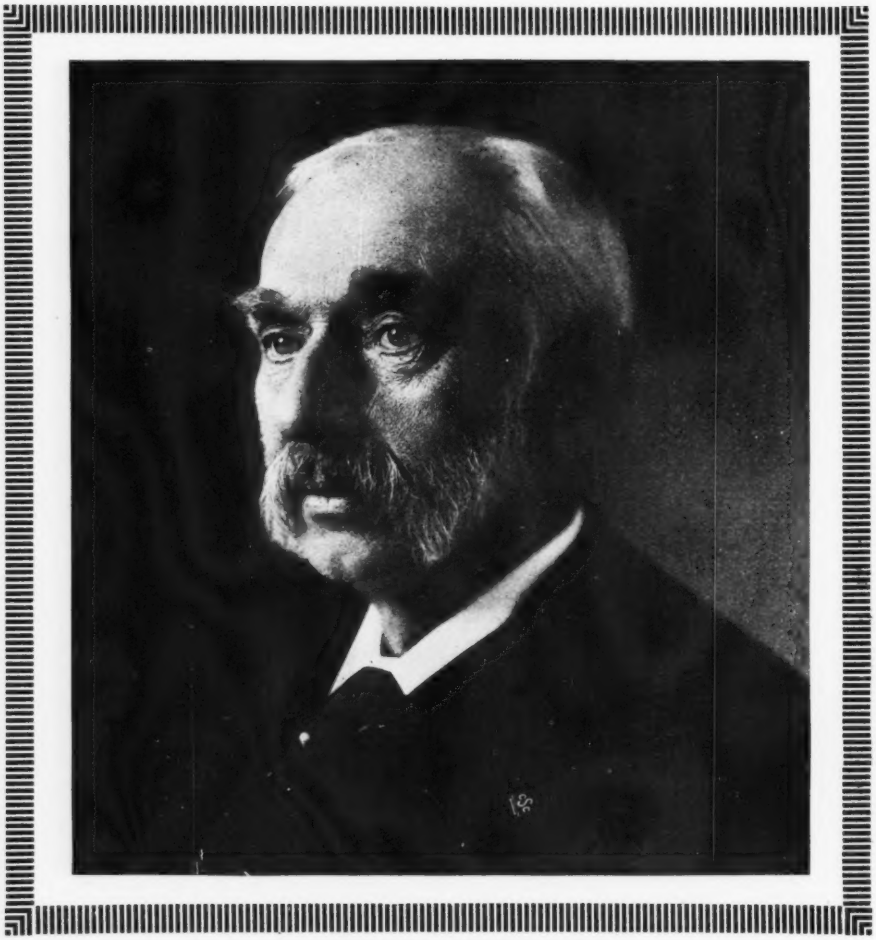
JEAN BAPTISTE JUPILLE AND HIS STATUE

Jupille was the first person vaccinated against hydrophobia by Pasteur. The statue representing him struggling with a rabid dog stands in front of the Pasteur Institute

Sir Rickman Godlee was educated at London University, receiving his B. A. degree in 1867, and his M. S. degree in 1873. In 1872, he finished his medical course, and in 1876 became a fellow of the Royal College of Surgeons.

In the course of an eminently successful career, Sir Rickman was appointed professor of clinical surgery in the University College Hospital, honorary surgeon in ordinary to the King, and, finally, in November, 1911, president of the Royal College of Surgeons. June 14, 1912, upon the occasion of the king's birthday, he was made a baronet by George V. He is the author of a work on anatomy, and has made numerous other contributions to periodical medical literature. It is of pleasant interest to know that he is a nephew of the late Lord Lister.

The contributions of Prof. Emil Abderhalden to medical science during the last two years are among the most enticing and practically valuable of the epoch-making period in which we live. As a result of the study of the prophylactic ferments of the body-tissues, he has been able to introduce definite diagnostic blood tests for pregnancy



SIR RICKMAN J. GODLEE, BART.

The President of the Royal College of Surgeons, England, who came to Chicago in November to inaugurate the newly established American College of Surgeons

and for carcinoma, measures that add greatly to the physician's resources and give promise of still further development in other fields.

Professor Abderhalden was born in Oberuswyl, St. Gall Canton, Switzerland, on March 9, 1877. He was admitted to practice in 1901, received his degree of Doctor of Medicine, at Berlin, in 1902, and since then has been honored as few young German scientists have been. His remarkable advancement rivals that of Schaudiun. In 1908, Abderhalden received the title of professor; and in the same year was appointed to succeed Munk in the chair of physiology in the veterinary college at Berlin. Three years later he was appointed to a similar position at the University of Halle, succeeding Bernstein. He has already declined two flattering calls to professorships in great universities: in 1908, one to Tuebingen, and in 1913 one to Vienna.

Professor Abderhalden has been a voluminous writer on physiologic topics, his book on physiologic chemistry having gone into three editions and been republished in English and German. His work on prophylactic ferments ("*Abwehrfermente*"), has been

PROFESSOR EMIL ABDERHALDEN

This distinguished young scientist has devised blood tests for the early diagnosis of carcinoma and pregnancy. He is professor of physiology at the University of Halle

equally successful, and is also available in English and Russian.

As already intimated, Abderhalden's work is of an exceedingly advanced character and promises to be revolutionary in diagnosis, and perhaps also in therapeutics. By facilitating the early diagnosis of one of our most dreaded diseases, it should be potent for the saving of many lives; and, meanwhile, its principles are being applied in many other directions, and what they may bring forth no man can tell. Watch this young German.

—

Pierre Paul Emile Roux, director of the Pasteur Institute, was born in Confolens, Charente, France, December 17, 1853. He studied at the classical college in his home town, then entered a medical career in the medical school in Clermont-Ferrand, where he first became associated with Duclaux, whom he assisted in laboratory work. He finished his medical studies in Paris, whereupon he entered the medical service of the French army, at Val de Grace; however, he gave up the prospects of a military career, because it did not offer him facilities for laboratory investigation, in which he was most interested. Soon after this he again associated himself with Duclaux, who in the meantime had gone to assist his old master,

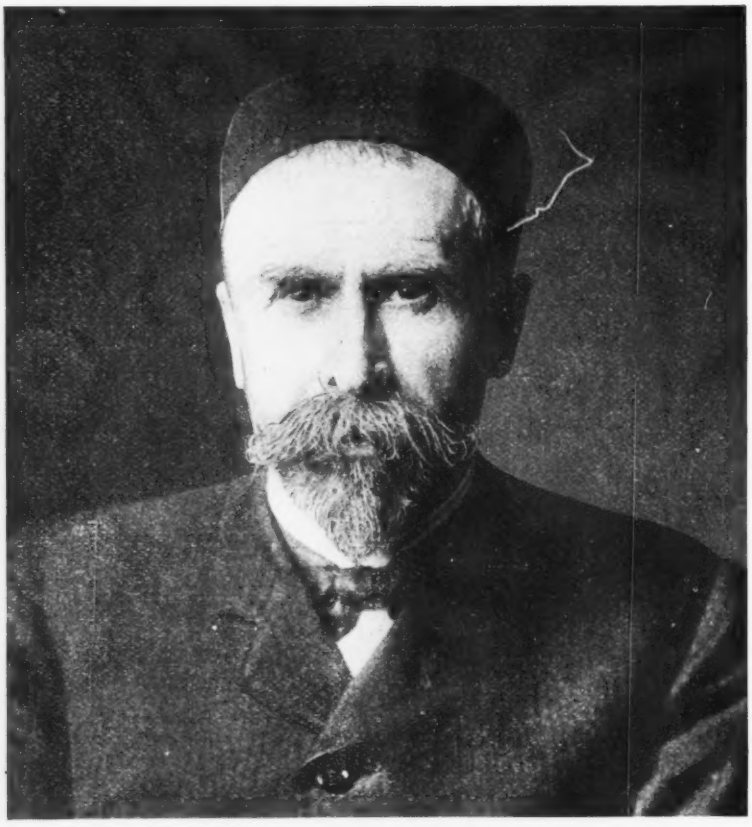


Photo: Underwood and Underwood

DR. PIERRE PAUL EMILE ROUX

Director of the Pasteur Institute, who took a prominent part in the celebration of the twenty-fifth anniversary of that great research institution

Pasteur. It so happens that Professor Roux has been connected with the Pasteur Institute since its establishment in 1888.

The name of Roux is identified with nearly every great movement in bacteriology and biologic therapy. His graduating thesis dealt with new discoveries regarding rabies, being a record of studies made in association with Pasteur, and culminating in the introduction of the Pasteur vaccine treatment for this disease, in 1905. His work on the etiology of diphtheria, conducted in association with Yersin, culminated in the discovery of the greatest therapeutic remedy of modern times, diphtheria antitoxin, in which he divides honors with Behring. Professor Roux has also made notable experimental investigations and discoveries in the etiology and treatment of tuberculosis, bovine pleuropneumonia, tetanus, the plague, and many other diseases of an infectious character.

Upon the death of Pasteur, Roux became a sub-director of the Pasteur Institute (in 1906) and finally succeeded to the directorship of this great enterprise, where he continues a leader of the biologic work of the century. Much of the development of the Institute is due to his energy and acumen.

Leading Articles

The Treatment of Syphilis

As Modified by Recent Advances in Therapy

By G. FRANK LYDSTON, M. D., Chicago, Illinois

Author of "Diseases of Society," "Genitourinary, Venereal and Sexual Diseases," "Sexual Hygiene for the Male," etc.

UNTIL recently the treatment of syphilis had remained essentially the same for ages. There were differences of opinion as to methods of administration, but mercury and iodine were the "reliables." Mercury is still our stand-by, while iodine has now a barely justified third place.

The treatment of syphilis naturally comprises, first, the treatment of syphilis *per se;* second, the treatment of parasyphilis, i. e., conditions in which—while active syphilis can not be shown—the morbid phenomena are indubitably due to syphilis, more or less remote.

In all parasyphilitic conditions, the effects of treatment and of bad habits must be considered.

Local Treatment

With the proper use of mercury and salvarsan, the local treatment of chancre is of no importance. Uncomplicated chancre promptly disappears under wise constitutional treatment. Chancre complicated by chancroid requires the same local measures as does simple chancroid under other conditions, namely, cauterization and the various antiseptic powders, of which latter iodoform is king.

Chancre should be kept clean, dry, and free from sources of irritation. Simple black or yellow wash or dry calomel are useful. The calomel should be pure. When irritating, it contains free bichloride.

Abortion of Syphilis

Experienced syphilographers abandoned as a fallacy the notion of aborting this disease long ago. The author experimented with it largely and once fancied that syphilis was modified by excision of chancre. Recent attempts to revive the "aborting" of syphilis by destroying the chancre by means of cautery or removal by excision have been made by tyros, who proverbially disregard all landmarks in syphilology. These experimenters possibly may learn more from their own experience than they have from that of their masters.

The discovery of the spirochete has not altered the status of the "abortive" treatment. In brief, it neither aborts nor modifies syphilis.

Prior to a positive diagnosis a presumptive chancre should be treated as little as possible and managed as if it were known to be chancre.

Complications of chancre demand treatment upon their own merits. If a diagnosis has not been made, the possibility of syphilis always should be borne in mind.

Destructive ulceration, phagedena, gangrene, and lymphangitis demand rest, perhaps the cautery, and hot or cold antiseptic applications. The actual cautery is best, and pure bromine second in value. Nitric acid is the most universally serviceable.

The diagnosis of chancre once established, mercury or salvarsan will rapidly clear up the condition.

In the diagnosis of chancre, the Wassermann test is useless before general blood infection, which is not necessarily shown by secondary symptoms.

The finding of the spirochaeta pallida, like the Wassermann test, when positive, is confirmatory of syphilis. When the test is negative, the diagnosis should still be open.

General Treatment of Syphilis

The general treatment comprises all measures which tend to preserve the general health and aid the specific treatment. Proper exercise, regulated diet and hours of sleep, plenty of fresh air, and freedom from worry

are essential. Frequent hot baths and the ingestion of large quantities of pure water are splendid aids.

Tobacco and alcohol should be interdicted —there should be no compromise. If given any latitude, the patient always abuses it. Many uncured cases of syphilis are chargeable to disobedience on the patient's part or to the doctor's "good fellowship," ignorance or inattentiveness.

A term at a health-resort or some mineral spring often is useful in assisting in the treatment of rundown victims of syphilis; these measures, though, never cure syphilis. Patients who resort to these places are in danger proportionate to their confidence in the potency of the waters. This confidence, fostered by mercenary quacks, leads to ultimate disaster.

Duration of Treatment

Despite the extravagant claims made for salvarsan and for the Wassermann test, no patient should be assured that he is permanently cured. A patient who, after three years' systematic treatment, remains free from active lesions for eighteen months subsequent to that is "probably" cured; but he must remain ever after on the alert, that is, he should have more or less frequent Wassermann tests and twice yearly a short course of treatment.

Time may show that the foregoing is too rigid, but as yet neither patient nor physician can afford to take chances in so tricky a disease as syphilis or to rely implicitly upon a blood-test or any new remedy.

Marriage

The same rule as to "probable cure" applies to syphilitics marrying. A "probable" cure means that marriage "probably" is safe. The physician, however, should lay the responsibility where it properly belongs—upon the shoulders of the client, and should not himself assume it. The danger of transmitting a faulty constitution to a child may be present long after the possibility of conveying active syphilis has passed.

The extent to which syphilis is a factor in the nutritional and developmental defects incidental to a bad heredity probably is far greater than is generally admitted.

Specific Constitutional Treatment

The general treatment of syphilis should subserve the following principles:

1. Assistance to the constitution in resisting the disease.
2. Inhibiting the activity or destroying the life of the spirochaeta.
3. Eliminating germ and tissue byproducts incidental to the action of the spirochaeta.
4. Breaking down, removing, and eliminating syphilitic products as fast as possible.
5. Protecting (by the foregoing measures) important tissues and organs from the effects of syphilitic lesions.
6. Relieving by surgical measures, where necessary, the secondary effects of syphilitic lesions.
7. Most important of all, protecting innocent persons from infection, and defending posterity by regulating the marriage of, and procreation by, syphilitics.

Mercury—How to Employ It

Mercury is still the standby in syphilis. We might dispense with all other remedies—including salvarsan—but not with mercury. Like all other drugs, mercury should be used scientifically. When so employed, it gives, in the large majority of cases, permanently good results. Mercury should be given as soon as the diagnosis is positive.

Where it is practicable to employ mercury, the inunction-method gives very satisfactory results; 1 dram of 50-percent mercurial ointment daily being the most effective average dose. The drug should be given in courses of from twelve to twenty-four "rubs," according to tolerance, the gums and mucous membranes of the mouth and tongue being carefully watched for possible stomatitis. A slight bluish line about the gingival edges, and slight ptyalism, indicate that the point of tolerance has been reached. The teeth and gums should at once be put in order, and kept in order during the entire course of treatment. The dentist is the syphilologist's best friend.

The courses of inunction should be intermitted for a month or so, varying with the individual case. Inunctions may be replaced, interchanged or aided by intramuscular injections or the internal administration of mercury.

Iodide of potassium in moderate doses and largely diluted with water is useful as an eliminant between courses of mercury. The iodide may be combined with mercury, in the form of the old reliable "mixed treatment."

Should severe ptyalism or stomatitis result from the mercury, the oldtime mixture of myrrh and potassium chlorate is quite effective as a mouth-wash. Chlorate of potassium also is useful internally in the

mouth disturbances incidental to mercury treatment; 10 grains, largely diluted with water, four times a day, is the rational dosage. The author believes that this drug is a useful adjuvant in treating syphilis.

The Intramuscular Method of Giving Mercury

The site of election for the injection of mercury is the glutei. The entire dose may be injected into one gluteus maximus or, if much pain, swelling or subsequent soreness is complained of, half the dose may be introduced on each side. The injection should be made deep into the muscle.

Ill effects usually result from placing more or less of the injection-fluid into the cellular tissue, which is far less tolerant of irritants (and infections) than is the muscle. In thousands of injections in his own practice, the author has never met with infection from the intramuscular method.

Antiseptic precautions are simple and probably not essential. The mercurial itself is a powerful germicide. The needle and barrel of the syringe should, of course, be surgically clean. A dab of tincture of iodine at the site of injection is sufficient skin preparation.

The most useful preparations of mercury are the succinamide and the salicylate. The dose of the former is from 1-5 of a grain to 1 grain, in 20 minims of distilled water. Of the salicylate, 1-2 grain to 1 grain is the proper average dose. It should be given in oil of sesame. Small doses may be given daily, or a maximum dose every fifth day. Internal administration of mercury and an alkali iodide may be combined with the intramuscular method.

The Intravenous Method

My clinical experience with the intravenous injection of mercury in syphilis has been extensive and favorable. I herewith submit a number of illustrative cases in which I have used mercuric chloride in this way.

In "malignant" cases and serious lesions, intravenous injections afford a safe and sure method of relief. The speedy mercurialization of the blood, and consequent prompt systemic effect of the drug, the relatively large doses permitted, the freedom from the painful effects of subcutaneous and intramuscular injections, and in general the absence of gastrointestinal disturbances especially commend the intravenous treatment. Bowel irritation occasionally occurs from the use of large doses of mercury intravenously. There sometimes occurs sudden severe salivation, the mouth reacting promptly in some cases.

Illustrative Cases

Case 1. A woman, 30 years of age, in the beginning of the third year of typic secondary syphilis. Pains in the limbs, lowered tendon reflexes, and a sensation of numbness and heaviness of the limbs were complained of at the time I was first consulted, and the patient stated that she had had these symptoms for several weeks. There were no other symptoms suggestive of ataxia. There was slight apparent loss of muscular power over the lower extremities.

I put the patient immediately on intramuscular injections of mercury succinimide; but she proved intolerant of the remedy, the pain being so severe that I was compelled to discontinue its use. Inunctions produced a severe dermatitis, and mercury internally resulted in severe gastrointestinal irritation, the stomach becoming so sensitive that I was compelled to discontinue medication by the mouth.

The indications for radical treatment being urgent, I resolved to try the intravenous injections, giving 25 minims of a 1-percent solution once daily for two weeks. Improvement was noted after the third injection, and the cord symptoms entirely disappeared at the end of ten days. The emergency apparently having passed and the stomach being again tolerant of drugs, I then stopped the intravenous injections and put the patient upon the routine administration of protoiodide of mercury.

Case 2. Woman, 23 years of age, with a gummy ulcer on the right ala nasi. Aside from this single tertiary manifestation of the disease, no lesions had been noticed for several years. The nasal ulcer proved very resistent to treatment. It yielded but slowly, and whenever cicatrization had been complete for a few days the lesion suddenly, without a warning, would recur. Mercury and iodide pushed to the point of tolerance had yielded only temporary benefit.

The patient was a large, well-nourished woman, so I began with 15 drops daily of a 2-percent solution of mercury bichloride. The curative effect of this medication was very quickly noted. The ulcer healed soundly within ten days, and it has remained healed for over a month, during which time the injections have been given twice weekly.

Case 3. A man, 33 years of age. This was a rather unusual case, being one of chancre of the tonsil. The primary lesion

was associated with an enormous cervical adenopathy on the left or corresponding side. The faucial inflammation was very marked. Mercury given by inunction and by mouth acted extremely slowly in this case, and, as deglutition was very painful, the patient complained very bitterly of his condition.

I began intravenous injections of mercury bichloride in a dosage of 15 minims of a 2-percent solution. I did not go beyond this dosage, for the reason that I was apprehensive that the large amount of mercury that had already been given in the ordinary way might suddenly take effect and in conjunction with the intravenous dosage produce disastrous results.

Within four or five days after beginning the intravenous injections marked improvement was noticeable, and resolution of the primary lesion and of the bubo in the neck went on very rapidly. The physiologic effects of the mercury became manifest on the tenth day, so the treatment was discontinued. The improvement, however, went steadily on, and at the end of three weeks the patient was in a very satisfactory condition.

Case 4. Patient, a man 35 years of age, had been under my treatment for syphilis for about five years, the case being a very stubbornly protracted one. Various lesions had appeared from time to time and had healed only after very large doses of mercury and potassium iodide, long continued.

The patient had been under tonic doses of mercury constantly for a period of six months, during which he had been, apparently, well. However, he suddenly again made his appearance for advice, presenting a gumma of the soft palate. This softened, broke down, and perforated within forty-eight hours. It appeared so malignant that I resolved not to rely on antisyphilitic remedies administered in the ordinary manner, and therefore put the patient on intravenous injections, using 20 minims of a 20-percent solution of mercury bichloride daily. Marked improvement was manifest at the time the third injection was given.

A permanent fistula undoubtedly will result in this case, but the destruction of the tissue was speedily checked and the process limited to an area very much smaller, in my opinion, than would have been the case with any method of treatment other than the intravenous.

Case 5. Woman, 40 years of age, under treatment for locomotor ataxia undoubtedly of syphilitic origin. This case was very difficult of management because of the intolerance of the stomach for mercurials and iodides, as also the extreme irritability of the skin, which practically prohibited inunction-treatment.

Some improvement in the symptoms was noted soon after the routine administration of mercury, but exacerbations of severe pain in the lower extremities continued to be a frequent and annoying symptom, and, as it was impossible to continue the treatment for any length of time, the case was especially trying. Intravenous injections of 1-4-grain doses of bichloride of mercury produced rapid improvement. The patient now is receiving the injections twice a week, and the case apparently is under control.

Case 6. Man 45 years of age suffering from a severe and obstinate cephalalgia of syphilitic origin. Mercury and the iodides were pushed to the point of tolerance, with but slight relief. I substituted the intravenous injections, administering mercury bichloride in 1-2-grain doses daily for one week. Relief was immediate. At the end of the week the headache had disappeared entirely. Injections are now being given semiweekly.

Case 7. Man, 50 years of age, whom I had treated for syphilis twenty years before, reported to me, suffering from nocturnal headaches and cerebral symptoms that were decidedly suggestive of an incipient paresis. Inability to concentrate as well as suspiciousness were noted, and the impairment of his psychic faculties had given rise to considerable alarm on the part of his friends. Gastric irritation and constipation were prominent symptoms, and these, together with the evident presence of autointoxication as a complication, gave the case a much more favorable aspect than otherwise it would have possessed.

The patient absolutely refused to submit to inunctions, and, as the stomach proved intolerant of mercury and the iodides, I resolved to try the intravenous method. First, restoration of the bowel function was attempted, with gratifying results, the mental symptoms improving markedly within a few days. The headaches, however, continued.

Then daily intravenous injections of 1-4 of a grain of mercury bichloride were begun. The headaches began to improve within three or four days after instituting the treatment, and within two weeks had entirely disappeared. For six weeks, during which time the patient has been taking no treatment, he had remained well, apparently. He will not submit to steady treatment, but has promised

to take a course of intravenous injections several times every year.

Case 8. A delicate woman 28 years of age, without a previous history of syphilis, presented herself with two painful nodes on the right tibia. Nocturnal pains were very severe, necessitating the administration of morphine by her previous medical adviser. She had been given small doses of mercury and iodide of potassium, without effect; large doses were not tolerated.

The patient was put on daily 1-8-grain intravenous doses of bichloride of mercury, with the result that within a few days the osteocopic pains ceased and the nodes markedly diminished in size. Slight permanent thickening of the bone at the affected points, however, resulted. This patient is now taking semiweekly intravenous injections of 1-8 grain of the bichloride, and apparently is doing well.

Case 9. A patient, whom I thoroughly treated for syphilis fifteen years before, reported, complaining of severe pain in the tibiæ for the last six weeks. The pain was especially marked at night. Examination showed a diffuse periostitis over both tibiæ, with slight thickening of the membranes, some edema, and exquisite tenderness on pressure.

I at once began the intravenous injection of mercury bichloride in 1-2-grain doses. When the patient reported for the second daily injection, he stated that the bone pains had disappeared within three or four hours after the first treatment. Within five days, during which time the intravenous treatment was given daily, the tenderness of the tibiæ entirely disappeared. On the sixth day I began intermitting the treatment because of slight ulceration, evidently of mercurial origin, of the mucous membranes of the cheeks.

It is now five weeks since the systematic daily treatment was suspended, during which time injections have been given twice weekly, and there has been no recurrence of the pain in the limbs and no disagreeable effects from the drug.

Case 10. Physician, 40 years of age, presented himself with a chancre on the right finger, a well-marked typic secondary papular syphilide. Time being an important consideration to the patient, intravenous injections of 1-4-grain doses of mercury bichloride were begun immediately.

Improvement was manifest within three days, the obscure bone pains from which the patient had been suffering having disappeared and the eruption having already begun to fade.

The intravenous injections were continued for ten days, and, the case being apparently under perfect control, were replaced by inunctions. The patient still is under treatment and doing well. He has had considerable experience in the management of syphilis, and characterizes the progress of his case as marvelous.

Case 11. Through the courtesy of my associate, Dr. Carl Michel, I saw with him a case of severe gummatous ulceration of the scalp, in which he obtained a most remarkable result from mercury bichloride intravenously administered. As Doctor Michel remarked, salvarsan could not have acted better.

(*To be continued*)

PLAYING THE GAME

Life is a game with a glorious prize,
If we only play it aright.
It is give and take and build and break,
And often it ends in a fight;
But he surely wins who honestly tries
(Regardless of wealth or fame);
He can never despair who plays it fair—
How are You playing the game?

Do you wilt and whine if you fail to win
In the manner you think your due?
Do you sneer at a man in case that he can,
And does, do better than you?
Do you take your rebuffs with a knowing gain?
Do you laugh though you pull up lame?
Does your faith hold true when the whole world's blue?
How are you playing the game?

Get into the thick of it—wade in, boys!—
Whatever your cherished goal;
Brace up your will till your pulses thrill,
And you Dare—to your very soul!
Do something more than make a noise;
Let your purpose leap into flame
As you plunge with the cry, "I shall do or die!"—
Then you will be playing the game.

—*Philadelphia Ledger.*

The Value of the Wassermann Test

With Reports of Many Cases, and Some Deductions

By E. A. FISCHKIN, M. D., Chicago, Illinois

THE Wassermann test, during the few years of its use, has stood the test of time. It is now universally agreed and proven by hundreds of thousands of tests, made the world over, that a positive Wassermann reaction practically shows the presence of syphilis, and that a negative Wassermann may, under certain conditions, enable us to exclude syphilis from the diagnosis of a disease. Clearly it is not necessary, at this time, to dilate upon the value of the Wassermann test as a method of diagnosing syphilis.

What may be of interest, however, is a description of the application of the test and its interpretation in individual cases. Clinicians, as well as serologists, may differ in their attempts to harmonize the results of a Wassermann reaction with the clinical symptoms of a given case. Therefore, the experience of each worker justifies the analysis and classification of a large number of cases and the derivation from them of general deductions which coincide in the experience of most Wassermann workers. This shall be the object of my paper. From a number of selected cases which I am to report we shall learn as to the working of the Wassermann reaction and its worth for the general practitioner.

Examples of Negative Wassermann Reaction

1. Author's case. Man 28 years of age. Had gonorrhea and its sequelæ four years ago. No history of syphilis infection. Vague symptoms. Was treated for syphilis and given a salvarsan injection by a physician. Wassermann reaction negative.

2. Dr. J. V. Fowler's case. Man 29 years of age. Nine years ago had a genital sore followed by a rash one week later which lasted five days. Had at that time a few mercurial inunctions. Wassermann reaction negative.

3. Case referred by Dr. W. F. Jacobs. Man 38 years of age. Exfoliacea linguæ of fourteen years' duration; affected parts atrophic. No history of syphilis. Wassermann reaction negative.

4. Case referred by Dr. G. C. Papageorge. Man 22 years of age. Superficial ulceration of nasal mucosa of one year's duration. Had similar ulcerations of left side of palate which shows deep scars. Wassermann reaction negative.

5. Case referred by Dr. T. Wild. Woman 36 years old. After a confinement fourteen years ago ulcerations of palate. After a second confinement three years later hoarseness which lasted three years. Soon after, ulcerations appeared on right side of nose. Present condition: fauces filled with scars, uvula and right arcus palatinus destroyed, right nostril obstructed by adhesions of mucosa, left nostril distended, upper lip and lower part of nose covered with nodular and linear scars, and three recent ulcers on nose and upper lip. Pirquet positive. Wassermann reaction negative.

6. Dr. F. E. Buechner's case. Man 25 years of age. Chancre, December, 1912; had mercurial injection for four weeks. May 1913, mucous patches and relapsing papular syphilides. Salvarsan 0.6 intravenously followed by 40 mercurial inunctions. June 30th, Wassermann negative. Recurrence of mucous patches in November. Wassermann, November 30, strongly positive.

7. Dr. F. E. Buechner's case. Man 24 years of age. Infection beginning of this year. Six weeks ago intravenous injection of neosalvarsan and a course of four weeks' inunction treatment. Wassermann reaction negative.

8. Author's case. Man 48 years of age. Primary syphilis followed by secondaries, February, 1898. Patient infected his wife, whose syphilis was very malignant. Both underwent at that time under my care several very vigorous courses of treatment. Since then three healthy children have been born to them. Wassermann (March, 1913) negative in both.

9, 10 and 11. Dr. B. Heym's case. Occipital headaches. Vague nervous symptoms. Suspected osteomyelitis. Wassermann reaction negative.

12. Author's case. Man 32 years of age. Obscure history of infection twelve years ago. Dry, scaly, at times fissured eruption of palm of left hand of six months' duration. Wassermann reaction negative.

13. Author's case. Woman 26 years of age. Pityriasis rosea of six weeks' duration.

Diagnosis of roseola syphilitica was made elsewhere. Wassermann reaction negative.

14. Author's case. Woman 64 years of age. Quite deep ulcer on oval form on left tonsil, with considerable infiltration of surrounding tissues, the pillars of soft palate not destroyed but distended and swollen; has developed in the course of five weeks. Wassermann reaction negative.

15. Author's case. Man 23 years of age. Exposure, August 7; patient at first consultation, September 10, showed an indurated small chancre of prepuce with an indolent left-side bubo; other glands not affected. Wassermann reaction negative. Later this patient showed positive Wassermann.

16. Dr. Y.'s case. Child six months old. Tubercular syphilides on face. Ulceration of lips and gums. Ulcerated and nonulcerated gummata of extremities and genitalia. Baby emaciated, in the last stage of marasmus. Has ceased taking nourishment for last three days. A Wassermann was made at a hospital and showed negative. Surgeon diagnosed septicemia. The syphilitic manifestations of this case were clear in spite of the negative Wassermann and I could elicit besides a clear history of a typical series of abortions from the mother.

Deductions from the Preceding Cases

In cases with an obscure history and no definite clinical symptoms a negative Wassermann will quickly clear up the situation and help to pacify the patient and serve to exclude syphilis definitely. (Cases 1–2.)

In cases where the clinical symptoms make the diagnosis between syphilis and other malignant diseases difficult, a negative Wassermann will, by exclusion, make the correct diagnosis possible. Cases 4–5 were shown to be tuberculosis, and Case 14 carcinoma, notwithstanding its rapid development. Case 12 turned out to be eczema.

The Wassermann reaction in nervous diseases (with the exception of paralysis and tabes) is negative in the greater number of cases. (Cases 9–11.)

Syphilis which has been thoroughly and sufficiently treated with mercury can be completely cured. (Case 6.)

A negative Wassermann reaction is of no prognostic value whatever if made only once, soon after the conclusion of a course of treatment. (Cases 6–7.) It is a grave mistake on the part of a physician to have a Wassermann test made after a few weeks of treatment and disappearance of visible symptoms, and then be satisfied with this one test and discharge the patient as cured; the reaction may soon turn positive again. (Case 6.) Have a test made at least every two or three months, and resume treatment if it again becomes strongly positive, for in the majority of such cases such a reaction will soon be followed by the reappearance of clinical symptoms, if the patient is not treated.

Salvarsan treatment produces a negative Wassermann reaction in the quickest time. Next to salvarsan, intramuscular injections of gray oil and thorough inunctions of mercury will most quickly change the reaction from positive to negative.

A negative Wassermann reaction in early primary syphilis gives no information regarding the diagnosis. (Case 15.) It usually becomes positive two or three weeks after the appearance of the chancre; but at this stage we have no need of it for its diagnostic value, since the clinical symptoms have usually made their appearance by this time. A negative reaction in primary syphilis is, however, of inestimable value in showing that the disease has not as yet become constitutional and indicating the possibility of attaining an "abortive cure" by immediate salvarsan treatment, thereby preventing the appearance of secondary manifestations.

The negative Wassermann in infants in the stage of marasmus has no diagnostic value, especially in the face of positive manifestations of syphilis. (Case 16.)

Examples of Positive Wassermann Reaction

17. Case referred by Dr. Irving. Woman 28 years old. Psoriasis palmarum of right hand, with typical circinate infiltrated edges. Three years' duration. No history of syphilis, denies ever having had syphilitic manifestations. Wassermann strongly positive. Eight intramuscular gray oil injections and twenty-four inunctions brought about a complete cure of the hand.

18. Dr. J. V. Fowler's case. Man 50 years old. Primary and secondaries fifteen years ago. For last six months dizziness and noise in ears. Slight deafness. Rheumatic; shooting pains. Wassermann reaction positive. On administration of potassium iodide, marked improvement.

19. Dr. D. Meyer's case. Man 26 years old. Florid papulo-pustular syphilides on face and trunk. Moist condylomata. Circinate syphilides on scrotum. Untreated. Wassermann reaction strongly positive.

20. Dr. F. E. Buechner's case. Woman 40 years of age. Nurse. Was troubled with

ulcers of ankle for years. Tuberculosis was diagnosed, and after a long course of unsuccessful treatment the foot was amputated. When patient consulted Dr. Buechner, she showed ulcers of right knee. Patient very anemic. Osteopathic pains in leg. Gastric crises. Wassermann reaction positive. Neosalvarsan 0.2, followed in four days by 0.6. Rapid healing of ulcerations.

21. Case referred by Dr. S. Soboroff. Man 36 years of age. No history of syphilis. Suffered injury to lip eight months ago—wood splinter perforated lip to upper jaw. Abscess and ulcer of upper jaw which did not heal after extraction of front teeth. Resection of triangular piece from upper jaw. Soon after ulcers developed on upper lip and side of nose. Pirquet negative. Wassermann strongly positive. Vigorous inunctions soon produced marked healing.

22. Author's case. Man 23 years of age. Chancre of internal urethra; thin discharge of pus. General adenopathy; maculopapular exanthem. Patient untreated. Wassermann strongly positive.

23. Author's case. Man 29 years of age. Had primary and secondaries eleven years ago. Had at that time a course of twenty intramuscular injections of mercury salicylate and mercury cyanide. Disappeared from my observation after disappearance of symptoms. Claims to have taken protoiodide of mercury internally two years afterwards. No symptoms whatever since. Intends to get married soon, and wants to be examined. Wassermann distinctly positive.

24. Dr. Brinkerhoff's case. Woman 22 years of age. No history of infection Developed tonsillitis seven months ago. Soon after cervical glands became indurated and painful. Denies having had maculopapular manifestations. Husband well. Gave birth to a healthy child three months ago. Present status: angina ulcerativa. Wassermann strongly positive. Salvarsan. Rapid improvement.

25. Author's case. Man 25 years of age. Exposure eight weeks ago. For last five weeks extreme itching, scabies-like lesions of hands, axillæ, pubic region and thighs. Was treated for scabies. No indurated sore on penis, but on pubic region one sore, among other crusty lesions, with marked indurated base. Wassermann strongly positive. Inunction treatment. Two weeks after starting treatment a strong maculopapular exanthem made its appearance.

26. Author's case. Woman 39 years old. Came to me for the treatment of lichen planus verrucosus. Suffered for two years with attacks of angina pectoris. Examination of the heart showed a systolic murmur of the aorta. Husband suffered long from headaches and was finally confined in an insane asylum, where he died from apoplexy. Distinct syphilitic series of abortions. Wassermann weakly positive. Mercurial inunctions with internal administration of iodides gave considerable relief to heart symptoms.

Deductions From the Preceding Cases

A positive Wassermann reaction renders inestimable service in the differential diagnosis of doubtful cases. (Cases 17, 21).

The Wassermann reaction is always positive when unmistakable clinical symptoms of syphilis are present. (Cases 17, 19, 20, 21, 22, 24, and 25.)

The reaction is always strongly positive in secondary syphilis when untreated. (Cases 19, 20, 21, 22, and 25.)

A gumma always gives a positive reaction. (Case 20 and 21.)

Latent syphilis always gives a weak positive reaction. (Cases 18 and 23.)

The Indefinite Wassermann Reaction

The weak positive reaction in latent syphilis is the stumbling block in Wassermann work. After all, the cases of doubtful diagnosis are not so very frequent. The experienced physician, at least the dermatologist experienced in the interpretation and recognition of cutaneous symptoms, will in the great majority of cases make the diagnosis correctly without the help of the laboratory test. Even in the doubtful cases reported and in which the Wassermann test was decisive, the clinical symptoms were of such a nature that, given the possibility of excluding other diseases with similar manifestations, no doubt was left as to their syphilitic nature. In former times, before we had the quick and convenient method of Wassermann, we knew how to assure ourselves in cases of a doubtful character by resorting to antisyphilitic treatment. If the effect was favorable we made a retrospective diagnosis of syphilis (ex juvantibus).

The greatest benefit which we expected to derive from the Wassermann test was in the cases of latent syphilis, in which there are no manifest symptoms, and in which the laboratory alone should show us the safe way to diagnosis and treatment. But, unfortunately, the way is not safe yet. The reaction is always weak on the positive or negative side in latent syphilis. Wassermann himself decries the acceptance of a weak reaction, without clinical evidence, as a basis for diag-

nosis and therapeutic action. Though many leading syphilologists have tried to improve the technic and to refine the reaction in the direction of stronger inhibition of hemolysis in syphilitic sera, we are still left helpless when decisive action or opinion is required, as in Case 23.

That the blood of latent syphilitics, containing fewer antibodies, must give a weaker deviation of the complement follows from the nature of the reaction. To put the matter in the words of Kromayer (*Medizin. Klinik.*, No. 10, 1912), we encounter in the four ingredients (amboceptor, complement, antigen and serum) which are concerned in the hemolysis of the sheep blood-corpuscles, two antagonistic principles; the first two ingredients inducing, the last two inhibiting hemolysis. The struggle between these two antagonistic principles goes on in the test-tube, and, as in many a struggle, the victory belongs to the stronger.

There is no doubt as to the outcome of the reaction if the strength of one or the other principle is overwhelming, as in the presence of an excess of antibodies in untreated secondary syphilis, which will bind even the strongest complement. But the outcome will be indefinite if the forces are almost equal. In such a case if we employ a little more complement we secure from a weakly positive serum a negative reaction, because only a part of the complement will be fixed, and the balance will go to produce hemolysis. In like manner we may convert a positive serum into a negative reaction if we take an insufficient amount of serum which will not be able to bind all the complement.

Kromayer's refined method, which I am using with benefit, consists in the following:

Technic When the Reaction Is Weak

Make the test according to the original method of Wassermann. If the reaction is weakly positive, make another test with less complement; then use instead of one Cc. of a 10-percent solution of complement, 0.8, 0.6, 0.5 Cc. of the solution in three additional test-tubes and see if the reaction does not become stronger on the positive side. In like manner, if the original Wassermann gives a negative reaction, while there is strong suspicion of the case being one of syphilis, make another test with larger amounts of serum. Instead of 0.2 Cc., use three more test-tubes with 0.4, 0.8 and 1.0 Cc. of serum and see if you get an increase of inhibition. This is illustrated by the following case:

28. Case referred by Dr. B. Meyer. Woman 34 years old. Married eight years. Not aware of ever having had primary or secondary symptoms. Husband admits having had syphilis before marriage. For last two years, left hand scaly. Distinct psoriasis palmarum syphilitica, associated with a few scattered syphilitic-looking papules on wrist and back of hand. She had a Wassermann made in a laboratory a few weeks ago and it was negative. As the clinical appearance resembled syphilis, I made a Wassermann with the Kromayer modification. The original Wassermann gave a weak positive reaction; the Kromayer modification brought out a strong positive reaction.

However, with all this excessive care, and with all the self-imposed larger amount of work, we get but meager practical results in the application of the test to cases of latent syphilis, as illustrated by the following case:

29. Author's case. Man 26 years of age. Contracted syphilis in May, 1909. Had no treatment. Married in June, 1911. In December, 1911, they came to me, the husband with palmar syphilis, his wife with florid secondaries and syphilitic angina. Wassermann in both strongly positive. During the year 1912 both had three courses of vigorous injection and inunction treatment. In February, 1913, the Wassermann of the wife was negative, while that of the husband was distinctly but not strongly positive. He got three neosalvarsan injections intravenously of 0.6, 0.6, 0.9 Grams, and one salvarsan, 0.6, in March and April, with intervals of three weeks. Each time after an injection his Wassermann was negative. After a lapse of three months, in August, his Wassermann was again definitely but not strongly positive.

Comment on the Weak Wassermann Reaction

The weakly positive Wassermann is of value only in the control of recent cases of syphilis as a guide in the treatment. It has no prognostic value in latent syphilis of later periods, and it cannot serve as a guide in the decision of the question of marriage in these late cases.

I believe that the words of Wassermann, expressed at the last International Medical Congress, in London, are of great significance. "*The fate of every syphilitic is decided in the first two or three years of the disease, when every case can and ought to be cured; what is not gained in this time will never be gained any more.*"

Conclusions

The Wassermann test is only a part in the diagnostic chain of symptoms of syphilis. It has a value only in conjunction with the other

symptoms of the disease. *It is corroborative evidence.* It can never serve as a safe basis for diagnosis when not supported by clinical evidence of syphilis or when contradicting clinical symptoms. Without the knowledge of recognition and interpretation of clinical symptoms the physician will often be confused and misled by the Wassermann test. Whatever value we shall give to the Wassermann test, it must be performed by reliable and most approved methods. The most reliable method, as agreed by most clinicians and serologists, is the original Wassermann. Modifications, when used, must complicate and increase the labor of the test, not shorten it. Short cuts and snapshots have no place in this work.

32 North State St.

Venereal and Sexual Diseases

A Talk About Treatment

By WILLIAM J. ROBINSON, M. D., New York City

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TO ATTEND the meetings of some of our advanced or special medical societies and to listen to the papers and discussions, one would think that drugs are no longer used in medicine, that materia medica and pharmacology are discarded sciences, and that the Pharmacopeia and the Dispensatory have been, or if not, should be, burned and their ashes scattered to the four winds. For, in the discussion of treatment, you very seldom hear the name of a drug referred to, and that only incidentally. Surgical treatment holds the center of the stage. After that comes electricity, with the high-frequency current, fulguration, and so on; then come the Roentgen rays, and radium (which, though a material substance, is not classed among drugs, for it owes its virtues to immaterial emanations); then various mechanical appliances, and, if more material things are referred to, they generally are the sera, vaccines, and bacterins.

Now, it should be utterly and entirely unnecessary for me to state that I am not in the very least opposed to any of the above agents in the treatment of disease. Opposition to them would be absurd and stupid. I use every one of the nonmedicinal methods and agencies in my speciality—the treatment of sexual and venereal diseases. I simply object to their monopolizing the stage to the exclusion of drugs, which I consider indispensable adjuvants in the treatment of almost any disease. If I saw drugs being used in the treatment of disease to the exclusion of other methods, I should be just as displeased; and I should then speak and write in favor of nonmedicinal therapeutics.

The true reformer not only starts the pendulum swinging in the right direction, but, when he sees that it has swung too far, he swings it in the other direction, so that a proper balance may finally be established.

In this paper I shall refer principally to the medicinal versus the nonmedicinal treatment of sexual and venereal diseases.

More than once I have had occasion to tell my fellow urologists that, if they were a little more familiar with the action of drugs, if they did not consider it beneath their dignity to devote some time to the investigation of the action not only of new but of some old remedies, their patients often would escape surgical operations and mechanical manipulations, and would be so much better off.

Calcium Sulphide Versus Biologic Therapy

Recently I attended a meeting of one of our most prominent medical societies. Among the papers read was one on the treatment of gonorrheal arthritis with gonococcus vaccines. The speaker reported three cases. Of these, two were stated to be cured, and one "practically" cured.

Now, it so happened that of the two reported as cured, one afterward applied to me for treatment; for he had remained well for about three weeks, then his wrist began to pain and swell again, and, as he did not want a repetition of the painful injections, he did not go back to his former doctor. And when he applied to me for treatment, the first thing he asked was whether I would use gonococcus injections on him. I did not use any gonococci on him, but treated him with calcium sulphide and arsenic iodide internally, and collargol ointment externally; and his wrist got perfectly well and has remained well for more than seven months. And the getting well of his wrist was to that young man a

matter of life and death, as he was making a living by playing the piano.

The other two of the speaker's cases were those of women. As one of these women was only "practically well" (and "practically" well some cases of gonorrheal arthritis sometimes get under any treatment), we will leave it out of consideration. The other patient reported as cured had received billions and billions of gonococci through a period of more than five months. The "practically cured" patient received fifteen injections of fifty to five hundred millions each. By the way, how some doctors do enjoy rolling these big figures between their teeth: 50,000,000, 100,000,000, 500,000,000—it sounds so big, and looks so impressive on paper.

Although I believe that the sera and bacterins may be employed in some rebellious cases and though I hated to adopt an antagonistic attitude, I could not help getting up and saying that I should feel ashamed if I could show no better results in gonorrheal arthritis, obstinate as that affection is, and that I should hesitate to come before a medical society with such a report. And then I spoke of the results which we obtain by saturating the patient with calcium sulphide and arsenic iodide, and by the external use of guaiacol, methyl salicylate, unguentum Crédé, and so on. And, of course, as I expected, there was hardly anybody in the audience who had ever heard of the use of calcium sulphide and arsenic iodide in gonorrheal arthritis.

Yes, at the end of the meeting I discovered two doctors who had heard of them.

Doubtful Value of Modern Inventions

We are justly proud of our new diagnostic urologic instruments. By the aid of the endoscope, cystoscope, cystourethroscope, urine-segregator, ureteral catheters, and so on, we can now diagnosticate with certainty conditions which we could only guess at before. But has our treatment made such very wonderful progress? A few men are doing good work; but, for instance, has even the treatment of gonorrhea, as practiced by the vast majority of the profession (and here I mean not only the general practitioner but the specialist as well), undergone such wonderful changes? I fear we must answer this question in the negative.

And, what's more, I fear—nay, I know—that our wonderful diagnostic instrumentarium is responsible for many, for very many, mishaps and complications. Of the last seven cases of epidydimitis that I have treated, three were induced by examination and treatment. Two followed the mere examination with the urethroscope, and one followed a forcible injection of argyrol. And I am sure that many extensions of gonorrheal inflammation from the anterior to the posterior urethra are caused by our various diagnostic instruments, which our young specialists are so fond of displaying.

And I think it is unfair, very unfair, to push instruments into a urethra when there is no real indication for them, and when it is done, as it often is, merely for the purpose of impressing the patient.

There is no need of "impressing" a gonorrheal patient. In treating hysteria, neurasthenia, and various other nervous and psychic conditions, we may need the aid of suggestion, but the gonococcus is absolutely unamenable to suggestion, and only laughs at beautifully furnished offices, enameled surgical chairs, large irrigators, and the latest models of urethroscopes.

If I have obtained some reputation for success in the treatment of venereal and sexual diseases, it is owing to two causes: first, I have respect for the male urethra, have learned that it was not made to be poked with instruments except for very good reasons; and, second, I have respect for drugs.

What Rational Medication and Management Will Do

Perhaps the latter is due to the fact that before devoting myself to urology I was an ardent student of pharmacology; but the fact is that the waves of therapeutic nihilism have passed over me without any effect, and I am as strong a believer in the virtue of properly prepared and properly administered drugs as I ever have been. And I believe that by the proper combination of drugs we can produce such a demulcent and antiseptic, and even solvent, effect upon the urine and the renal and vesical mucosa as to render operative interference in numerous cases unnecessary.

Unpleasant as it is to say it, the truth must be stated, namely, that a good part of one physician's practice—at least of the writer's practice—is owing to the meddlesomeness of the other physician. The meddling is done in good faith; the doctor means to do his best, he wants to hurry matters and make the patient well as quickly as possible; but the results often are disastrous. And by merely stopping all injections, the use of all sounds and dilators, all

examination and instrumentation; and, rather, by ordering simple demulcents such as flaxseed-tea and infusion of triticum; by administering mild antiseptics like arbutin, sodium benzoate, small doses of hexamethylenamine tetramine (urotropin) or the balsamics, the best of which still remains oil of santal and its various chemical combinations, for example gonosan (santyl, lacto-santal, thyresol); by giving an occasional sedative rectal suppository or advising a sitzbath; by such means we often obtain results that are highly gratifying to the patient and at the same time increase our reputation enormously, when, as a matter of fact, most of our treatment has been more of a negative than of a positive character. To correct the effects of somebody's overzealousness, is not such a difficult matter.

There is one urologic procedure which I would condemn most emphatically when it is not employed for very good reasons and by skilful and practiced hands. I refer to ureteral catheterization. It is not three hours since I discharged as cured a patient who came to me five weeks ago in a very deplorable condition. According to his statement, he had had some pus in the urine for several days, and the day before calling on me he had applied to a specialist, who had catheterized his ureters for diagnostic purposes. The result was, severe cramps, hemorrhage, and, later, a chill.

When this man came to me the hematuria was very distinct. Rest in bed for a few days, together with a course of arbutin and, later, small doses of urotropin, brought about an amelioration of the symptoms, and now his urine does not contain a particle of pus. It is not necessary to attempt to be ultrafine in diagnosis, unless our ordinary methods of treatment prove unavailing.

What the Inventor of the Cystoscope Said

I wish to report something which I do not remember reporting before, but which is very significant, and which, moreover, coming from the source it does, deserves pondering.

The late Prof. Max Nitze, the inventor of the cystoscope, has done more for cystoscopy and ureteral catheterization than any other urogologist, living or dead. He not only was a great physician, he also was a good man. Though Nothnagel says that only a good man can be a good physician, still, there are some great physicians who are not such very good men. But, as said, Nitze was both. He was very conscientious in the treatment of his patients and he felt keenly the damage done to other patients by his instruments in the hands of overzealous practitioners. And this is what I heard him say in the presence of several physicians, at his office one evening —to be exact, on March 18, 1905:

"When I see what is being done to some patients, I am forced to the conclusion that it would have been better for humanity if ureteral catheterization had never been invented."

While the instrumentarium for ureteral catheterization has undergone some improvement during the last five years, and while those who practice it have, in general, attained a higher degree of efficiency and manipulative skill than was the case several years ago; still, I pity the patient whose ureters are invaded without very definite reasons, very positive indications, and I repeat that Nitze's words are worth pondering over deeply. And I will say, risking repetition (it is only by frequent reiteration that we can impress a truth), that, *cæteris paribus*, those who use the fewest instruments and the mildest measures, and are on good terms with the materia medica, will obtain the best results in treating the diseases caused by the gonococcus.

Useful But Little-Used Drugs for Syphilis

While in syphilis three drugs stand out prominently and are practically indispensable; still, I assert that the physician who is thoroughly familiar with the action of other drugs besides mercury, salvarsan, and potassium iodide, and who uses a number of them according to indications, either as adjuvants or as substitutes in the intervals, will attain far better results than those physicians or even specialists who believe that mercury, salvarsan, and iodine are the alpha and omega of antiluetic treatment.

And I venture to maintain that even in spite of the wonderful reports of success with salvarsan (dampened here and there by the report of a neural complication, a recurrence, or a fatality) other drugs will not become entirely superfluous in the treatment of the syphilitic scourge. General eliminatives, diuretics, and diaphoretics (don't forget small doses of pilocarpine), and tonics, and sanguifacients (chalybeates) will, still, be required, and still an occasional use will be found even for the old and hoary Zittmann's decoction.

If this is heresy or old-fogyism, make the most of it.

What is true of venereal diseases is applicable to sexual disorders.

In the treatment of sexual disorders, our

main reliance, outside of drugs, has been upon electricity. But I regret to say that, not taking into consideration the element of suggestion (and suggestion will not carry the patient very far, except in cases of undoubted psychic impotence—the frequency of which is greatly exaggerated), the results from electricity have never been very brilliant, and certainly not superior to those obtained from proper medicinal treatment.

If it comes to comparisons, I should say that hydrotherapy in its various forms is decidedly superior to electricity. But, whichever of the nonmedicinal agencies be given the palm of precedence, drugs always form a very useful, and at times an indispensable, adjunct, and they can be discarded only at the expense of the patient.

In short, in the treatment of human ailments and diseases, drugs play, and probably always will play, an important role. In some diseases, they are of paramount importance and occupy the very first place; to attempt to treat the patient without them would be criminal. In other diseases, while not indispensable, they are useful adjuncts; to attempt to do without them would be foolish.

Surgery, diet, exercise, hydrotherapy, mineral waters, direct sunlight, heat, massage, electricity, the x-rays, the Finsen light, radium, the various biologic products, psychotherapy, hypnotism, all these are important agencies in the treatment of disease; in many cases they are indispensable; in many cases any one of those agencies will alone accomplish the cure.

But materia medica—materia medica in the oldtime sense, comprising drugs of vegetable, mineral, and animal origin—is second to none of them. And, taking into consideration the vast number of diseases in which drugs are useful, their universality, simplicity, and ease of employment, they are superior to any of them, with the exception perhaps of surgery.

We are not yet ready to throw our materia medica overboard.

12 Mt. Morris Park W.

Lie Down and Die!

A Study of Posture and Prognosis

By DOUGLAS H. STEWART, M. D., New York City

PERHAPS, since one often reads the expression, "This is one of the penalties that man pays for the upright position," the profession at large may have come to the opinion that the recumbent posture is safe. Yet, the penalty for lying supine may be death—a fact which everybody knows in theory and too often neglects in practice.

Died Because Kept on His Back

It is necessary for me to paint with a broad brush, to leave exceptions unnoticed, and to begin with the basic fact that many a man has died because he was kept on his back.

As the present mortality of the conditions to be described is over 70 percent, I shall have accomplished my purpose, if this article finds one attentive reader who is engaged in active practice.

Matters should be viewed from a bedside standpoint. Quick relief is urgent in its demands, pathology and postmortem diagnosis may well be neglected. Causes may be searched for after recovery. A good understanding of the mechanical principles involved, is worth much more to effective treatment than the information acquired by a life-long study of the chemistry of the ptomaines.

And the man who does understand mechanics will find fewer cases to group under the diagnostic terms of acute indigestion, gastric dilatation, ptomaine poisoning and so on; for he will know that lying upon the back is a constant factor in all of them, and either is, or soon becomes, accompanied by unattainable peristalsis; the combination reveals, at autopsy, either a kind of flattened, angleworm thing slid into the pelvis and hardly recognizable as intestine; or a dilated, bleached, impotent ileum.

It is quite impossible to describe the many forces and influences at work when a man is lying on his back.

The two fundamentals are, the patient is lying on his back, and the stomach is distended. Roll the man over on his stomach (prone) and then plan your treatment. Otherwise you are an inefficient workman.

A "Scheme" Which Explains the Trouble

The mechanical lesson may be learned by a scheme. Use a soft-rubber hose, run water

through it, put your foot on it, to represent the mesenteric strap. The part above the foot will expand; below, it will contract. Now, if someone pulls on the contracted portion, that will stretch and become still smaller. This happens when the man lies on his back.

The intestines slide into the pelvis, lengthen, make their caliber smaller, and, in addition, throw their whole weight on the mesenteric strap, thereby tightening the strap and choking the duodenum more than ever.

Roll the man into the prone position, and, if you have great good fortune, the intestines will fall out of the pelvis into the abdomen, and the condition will be relieved. If not, wash out the stomach and clear it of its toxins before they kill. Do not make the error of considering that the severe cases are only seen postoperatively; they are only too common in hospitals. So is the prolonged supine position of the patient.

Most of my troubles have been postoperative, it is true, but one nonoperative fatal case was caused by a gonorrheal inflammation in the pelvis. Another was a nonoperative case, where the stomach distended, tore off a large artery, and death was practically instantaneous from hemorrhage. No blood in the stomach or bowel. The condition is often owing to lack of exercise of the abdominal muscles (desk-work atrophy of the abdominal wall), but it is not due to either heart failure or acute indigestion, tho both may be present.

The hospital men are well acquainted with this condition, that is all. Especially is it well known where the attendants are particularly gentle. One man, a competent operator, used to be very careful to slide the patient very gradually from the operating-table to a wheeled pony-carrier. Oh, well, he had gastric-dilatation cases all the time, while a colleague, perhaps no more able, used to grasp his patients, bend them double, and shake things into place. The results were just what might have been anticipated. One maintained the supine position carefully, the other did not. The latter may have had postoperative dilatation complications, but, if so, they were rare. I do not recall his having had any.

Sometimes the intestine just simply quits. In this condition it dilates, does not slide into the pelvis; inhibition, outlasting contraction, as usual, produces the paralytic ileus, but its firm contraction, which once held open the segment beneath the mesenteric strap, collapses like a wet towel. In all cases of stomach dilatation—never mind causes, which may be overeating or starvation, fatigue or lack of exercise, operation or the need of operation, ptomaines of bad food poisoning should have sickened other partakers. But, get the man prone, wash out his stomach (with normal salt solution), give an alum enema in the bowel. Control vomiting, and get a vermicular contraction in the intestine with a hypodermic injection of physostigmatine salicylate, 1-50 grain hourly; three doses if necessary. One-half hour later, in case of failure to get relief, give arecoline hydrobromide, 1-10 grain. Do not forget that pituitary extract in three times the obstetric dose is very effective. Use that one-half hour after the arecoline, if no flatus passes by that time.

As a last resort, induce spinal anesthesia by lumbar puncture. (See Lanphear, "Surgical Therapeutics," page 63.) Spinal anesthesia will block the splanchic nerves and produce a free bowel movement within an hour. If it should not do so, you are dealing with a heavy sphincter ani, the result of old previous inflammation. Dilate that. The spinal anesthesia makes dilatation easy.

There Are Two Don'ts

1. Don't give a cathartic by mouth in this instance. It cannot work, but can do damage to the collapsed or overstretched intestine. Get your peristaltic wave started first; if you do not, epsom salt, for instance, either will be vomited or cause sudden death.

2. Don't give morphine. You might as well hit your man across the abdomen with a club. There is small difference between palsy from shock or from a splint.

Upon and after recovery, put an abdominal supporter on the patient. See that he wears it.

Making Good in Medical Emergencies

By GEORGE H. CANDLER, M. D., Chicago, Illinois

EDITORIAL NOTE.—In succeeding issues of this journal Dr. Candler will continue the discussion of the medical emergencies, while Dr. Perry, whose paper follows this, will consider the surgical emergencies. These articles will be found both interesting and helpful.

THE physician who may be called upon at any time to meet medical as well as surgical exigencies should equip himself with certain essentials. The various socalled emergency-bags meet many requirements, but some of the most critical positions the doctor is compelled to occupy present themselves suddenly—often when he is on his daily round or far from any source of supplies.

The country practician, especially, is apt to have to cope with grave dangers at a moment's notice, and victory will depend not only upon his knowing what to do or to leave undone, but also in having, or being able to originate, the things necessary to work with. For instance, someone swallows by mistake a few drams of one of the mineral acids—hydrochloric (fatal dose 4 drams), sulphuric (fatal dose 1 dram), or nitric acid (fatal dose 1 1-2 drams). The doctor visiting nearby reaches the patient within ten minutes. The poison is identified and the physiological antidotes are remembered. *But*, the morphine and strychnine are in his hypodermatic case, and the case is on the office-table a mile or two away!

The man who can meet emergencies—even when through his own shortsightedness he helps create them—goes to work and pours soap-suds into the patients' stomach, together with lime from the wall, the white of raw eggs, and baking-soda, thus neutralizing the poison. Camphor usually is obtainable and makes a good, rapidly acting stimulant, and, by the time the chemical antidotes have geen given and hot fomentations applied to the abdomen, it is likely the lacking morphine and strychnine will have been secured.

To have failed to do instantly what *could* be done, because the socalled physiological antidotes were not at hand, or to omit sending for the requisite drugs if it were at all possible to obtain them, would be to fail in a dire emergency. If, moreover, that physician ever stirred from his office again without a hypodermatic syringe and a proper selection of emergency-remedies in his pocket, he failed to learn from experience; which, after all, is the most impressive teacher.

It is just as well, however, to realize that the right thing to do in any emergency you may encounter has been discovered and done by others, and you should profit by their experience, instead of waiting to find out things for yourself at the expense of your patients.

I once knew an old doctor who believed very firmly in the efficacy of the stomach-pump, and always carried it with him. By its prompt and vigorous use he had saved several individuals who had taken poison. But one day, when called to attend a woman who had swallowed sulphuric acid (oil of vitriol people still call it), he inserted the stomach-tube, and was very much surprised—and mortified—to find that the soap and water he poured in was filling up the abdominal cavity. Of course, the woman died, and the doctor learned—by personal experience—that the use of the stomach-tube is distinctly dangerous when strong corrosive acids have been ingested.

Every physician, of course, is supposed to be familiar with this and similar basal facts; but, unfortunately, the human brain will not retain everything, and in the effort to assimilate a thousand and one impracticable things the doctor lets go of many essentials. Not very long ago a doctor who has been in active practice for fifteen years lost the only child in a family, because he did not recall that marking-ink really is nitrate of silver and the best antidote therefor is common salt; which, of course, was readily available.

It is out of the question to have on one's person or even immediately available *all* the remedial agents which might be required in any medical emergency; still, one can always be prepared to relieve pain, to induce prompt emesis, diuresis, diaphoresis, catharsis, somnolency or narcosis, to stimulate or sedate cardiac action or reestablish failing respiration. It is equally easy to provide the means with which to control spasm, hemorrhage, and hyperpyrexia. As a matter of fact, in most emergencies we shall have to do one or more of these things.

The really essential remedial agents are few and may be enumerated as follows:

(1) A hypodermic syringe in perfect order, together with (2) a supply of hypodermic tablets of H-M-C, atropine, apomorphine,

cocaine, morphine, lobeline sulphate, pilocarpine, strychnine, digitalin, cactoid, gelseminine hydrobromide, glonoin, hyoscine hydrobromide, sparteine, and veratrine. Any necessary combinations can readily be made as need arises. (3) A few perles of amyl nitrite, ampules of adrenalin-chloride solution, ergot, camphorated oil, ammonia, and nuclein. (4) Chloroform, 2 ounces. The foregoing, together with (5) a well-fitted pocket instrument-case, and (6) a flat case holding from 12 to 26 vials of active-principle granules, can readily be carried in the coat-pockets.

The larger case of granules might contain aconitine hydrobromide, gr. 1-800; aloin, gr. 1-12; anodyne for infants (Waugh); apomorphine hydrochloride, gr. 1-64; arbutin, gr. 1-6; arsenous acid, gr. 1-64; atropine sulphate, gr. 1-250; brucine hydrochloride, gr. 1-128; calcium sulphide, gr. 1-6; calomel, gr. 1-6; monobromated camphor, gr. 1-6; codeine sulphate, gr. 1-64; colchicine, gr. 1-128; copper arsenite, gr. 1-1000; digitalin, gr. 1-64; emetoid, gr. 1-64; glonoin, gr. 1-250; hyoscyamine sulphate, gr. 1-1000; morphine sulphate, gr. 1-12; podophyllin, gr. 1-6; quassoid, gr. 1-64; quinine arsenate, gr. 1-64; strychnine arsenate, gr. 1-128; veratrine hydrochloride, gr. 1-128.

The assortment for the smaller case might be: aconitine hydrobromide, gr. 1-800; anodyne for infants (Waugh); atropine sulphate, gr. 1-250; calcium sulphide, gr. 1-6; calomel, gr. 1-6; codeine sulphate, gr. 1-64; digitalin, gr. 1-64; glonoin, gr. 1-250; hyoscyamine sulphate, gr. 1-1000; podophyllin, gr. 1-6; strychnine arsenate, gr. 1-128; veratrine hydrochloride, gr. 1-128.

What the Special Emergency Satchel Should Contain

Thus supplied, the practician can feel assured that he is able to cope effectually with practically any emergency confronting him in general practice. It is as well, of course, to have a special satchel fitted out with ordinary first dressings, antidotes for the more common poisons, an intubation outfit, catheters (in sterile container), colon-tube, stomach-tube, speculums (aural, nasal, vaginal, rectal), a tube of ethyl chloride, transfusion-apparatus, and a supply of antiseptics. If the emergency occur when the doctor is near the office or making the rounds in his vehicle, the whole outfit is available in a moment, and its possession may mean a very great deal to him.

As for myself, I carry in my satchel a poison chart and the "Pocket Gray," for I must confess that I cannot remember *all* the antidotes or recall the minute regional anatomy of every part of the body. If I find myself in doubt, I first do all I possibly can think of, and then "look in the book and see" what more may be tried under the circumstances.

Some men may consider reference to a manual at such a time "unwise"—even derogatory—but I find that facts that are impressed upon one's mind under stress have a habit of sticking. And, anyway, the essential thing is to "meet the emergency," and you cannot convince yourself (or others) that you have done your full duty if you find out an hour or two after the patient is dead that, maybe, some simple (but omitted) procedure would have saved his life.

I once had to do a tracheotomy in a tenement at 2 o'clock in the night with a penknife and keep the wound open with two bent hairpins and a rubber band. The only light available was a smoking oil-lamp in the hand of a palsied grandma. I cannot say I enjoyed the proceeding—but I saved the child. Moreover, the very next day I procured an intubation outfit—and learned how to use it. And, by the way, it might be well for every physician possessing the instrument to satisfy himself that he actually can introduce the tube "in an emergency," and remove it later. After one has vainly tried a dozen times to insert the tracheal tube and the parents and nurse show unmistakable signs of hysteria, it is distinctly humiliating to have to send for another doctor and see him slip the appliance into place in ten seconds. That kind of "emergency" can—and should be—carefully avoided by diligent prior study and preparation.

Loss of Consciousness—What It Means

The unconscious patient is a particularly trying one. In the first place, the cause must be ascertained and, as the individual himself can give no help and the relatives or bystanders are usually too excited or frightened to extend rational information, the physician is thrown entirely upon his own resources.

More or less profound unconsciousness is present in asphyxia (suffocation or from inhalation of gas), apoplexy, epilepsy, electric shock, coma, convulsions (in children), collapse (simple nervous or "shock"), hysteria, drowning, trauma of head or spine (concussion), sunstroke or heat-stroke, and syncope.

Though the terms coma and syncope frequently are used almost synonymously to

describe a condition of insensibility, there is a material difference in these two states.

The *comatose* individual lies prone and is either entirely unresponsive to external stimuli or he moves restlessly and moans or mutters in delirium. Occasionally a certain degree of perception does exist. The pulse generally is full, the face flushed and the pupils (except in opium poisoning) are dilated. The respiration may be stertorous.

In *syncope*, on the other hand, we have to deal with cardiac inactivity. Loss of consciousness may be brief, recurrent or prolonged. The patient may fall suddenly as though pole-axed, sink gradually down or seek a place to sit or recline. The face is pale, the skin cool, the radial pulse thready or even absent, and the heart-beat faint; respiration is sighing and shallow. There is, unfortunately, no material difference in the clinical pictures of an ordinary "faint" and of the *ante-mortem* syncope of a serious cardiac lesion.

In every instance, the physician first upon the scene must endeavor to familiarize himself rapidly with the exact conditions present. If he knows the patient to be a victim of chronic renal disease, diabetes or cerebral tumor, the cause of the comatose condition will be fairly obvious. If, however, the patient be an epileptic or an alcoholic, his insensibility may be due to cerebral injury incurred through falling.

Serious Mistakes Made When Alcohol is a Factor

A diagnosis of "alcoholic coma" should be made only after a most thorough examination and absolute exclusion of any gross lesion. Police surgeons, grown careless from constant contact with "drunks," have time and again sent individuals, picked up on the streets unconscious, to the cells as "insensible from drink," when as a matter of fact they suffered from fracture of the skull or uremic coma. Death has resulted from such erroneous diagnosis altogether too frequently. It should be remembered, in this connection, that when anyone falls unconscious in a public place the most readily procured alcoholic stimulant nearly always is administered by someone; hence, the mere fact that the breath "smells of liquor" means little or nothing.

While examining the patient, the friends or bystanders should be questioned as to the conditions that obtained at the time of the attack. Diabetic coma comes on gradually; a cerebral hemorrhage, or apoplexy, usually causes sudden unconsciousness. The epileptic will have "had a fit," the alcoholic has shown some sign of being "drunk and incapable." Not infrequently the stains upon the front of the trousers in a male and the peculiar odor of acetone in the breath will reveal the existence of diabetes.

The fat, short, fullblooded individual breathing stertorously and presenting a suffused face and a hard, rapid pulse probably is a victim of cerebral hemorrhage. Unwise consumption of alcohol may, of course, have precipitated the accident. The comatose, thin, anemic patient is more likely to be a nephritic or diabetic. If there is froth about the mouth or the tongue has been bitten, it is fairly safe to regard the patient as epileptic. The small pulse, cold extremities, pinpoint pupils, and infrequent faint or "puffing" respiration of the victim of opium poisoning are readily recognizable. A distinct "squint" bespeaks intracranial trouble; inequality of the pupils, a lesion of one hemisphere; equal enlargement (the condition usually observed in deep comas), general cerebral compression. In uremia and epilepsy, both pupils are widely dilated.

The pulse of cerebral hemorrhage is full, hard, and slow; in apoplexy, (thrombotic), it is much feebler; the heart sounds, moreover, are faint. In renal disease, high tension obtains. In Stokes-Adams disease, that is, cardiac inadequacy (a very frequent cause of sudden death), the pulse rate may not exceed twenty. Individuals suffering from this form of myocardial degeneration may complain of dyspnea and vertigo, and suddenly become unconscious. Not infrequently they present more or less edema or ascites. As has been stated, the pulse of a person who has "fainted" is always feeble and sometimes absent.

The temperature of most comatose individuals is subnormal. In heat-stroke and pontine hemorrhage, it is, however, high.

If the patient has swallowed certain poisons, the mouth and lips will prove informative. The odor of the drug may also be apparent. Phenol, the mineral acids, caustic alkalis, and ammonia will whiten or destroy the mucosa. If the lips are a bright-red, carbon-monoxide poisoning must be thought of. An individual found unconscious in a stove- or furnace-heated apartment and presenting the symptoms of narcotic poisoning may have inhaled coal-gas (carbureted hydrogen).

The treatment of the various conditions producing coma or syncope will be considered in the next paper.

(*To be continued*)

Making Good in Surgical Emergencies

Or Emergency Surgery in the Country

By RALPH St. J. PERRY, M. D., Farmington, Minnesota

EDITORIAL NOTE.—This article is a "companion" for Dr. Candler's article on "Making Good in Medical Emergencies," which precedes this. It will be followed by others on the same general topic.

IN DIFFERENTIATING the city from the country it becomes convenient to fall back upon the classification of the United States Census Bureau, which draws the line at 2500 population. Any corporation or community having within its limits less than that many people is hereafter to be adjudged a village, hamlet, settlement, cross-roads, or just "country." And any physician living and practicing within such a domain is a country doctor.

Of the country practitioner it is expected by his patrons that he should be greased lightning on matters of diagnosis and infallible in the treatment of surgical emergencies; and to the credit of these same country practitioners let it be said that almost invariably they deliver the goods when occasion demands. In more than thirty years of observation I do not recall one case where the country doctor fell down seriously or showed the white feather.

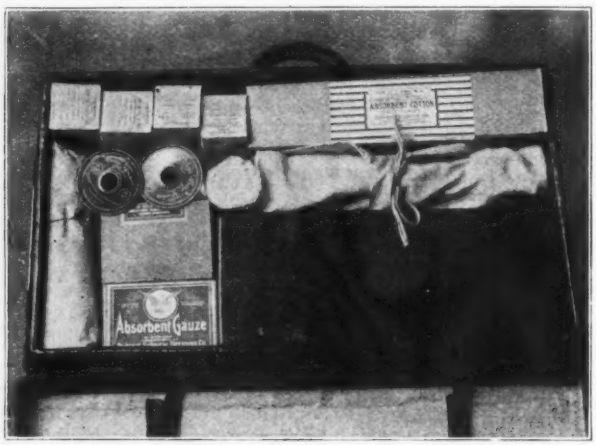


Fig. 1. The Major Operating Bag

Years ago I was concurrently assistant chief surgeon for a large railroad system, chief surgeon for a large industrial corporation and special examiner for one of the principal accident insurance companies; during which time I was frequently called upon to attend victims of wrecks or industrial accidents, or to adjust accident claims, and very rarely was it found that the country doctor who first attended the injured persons had done other than the proper thing.

My country friends should never lose sight of the fact that many of the epoch-making discoveries and innovations in surgical art, the startling and daring new operations, can be attributed to country doctors or to those who laid the foundations for their success in regions remote from the surgical centres. Notwithstanding the disparagement and disapproval of a few of the holier-than-thou surgeons, who endeavor by means of a self-raising pragmatic afflatus to elevate themselves upon a pinnacle where they become the cynosure of the public gaze, and who think that no one outside of their select chirurgic circle should do any surgery, the country doctor will continue to surge p. r. n.

Country Surgery Is Not Easy Surgery

Most denizens of the city, in their circumscribed vista, look upon country life as a calm and peaceful affair, as one long, continuous sleep, devoid of incident or accident. But those who have to deal with country life in a cold-blooded, business-like way have discovered that the man who lives and works in the rural districts is more exposed to danger than his city brother. Accident insurance companies rate farmers and farm hands as hazardous risks—put them in a class with machinists, buzz-sawyers, steam-shovel men, cornice workers, quarry drillers, telephone and telegraph linemen, and such workmen whom we generally look upon as engaged in dangerous occupations. Insurance authorities even regard railroad work as less dangerous than farming. So you can

see the prospects for emergency surgery are very good in the country and it behooves the country surgeon to be prepared for instantaneous action.

By being prepared I mean you should be stocked up with bandages, splints or splint materials, sutures, ligatures, and the various other supplies needed in repairing damaged humanity. Your instruments should be kept in good order, and, with your supplies, should *always* be kept where you can find them—even in the dark. Adopt a good system of arrangement or storage and never change the essential features thereof. The best way to do this is to have several satchels or bags in which your necessary paraphernalia is carefully and securely packed. In my own equipment for years I had four such bags, one each for major operations, minor operations, fractures and dislocations, and obstetrical cases. Also a Buchanan folding operating table and a strong canvas cot.

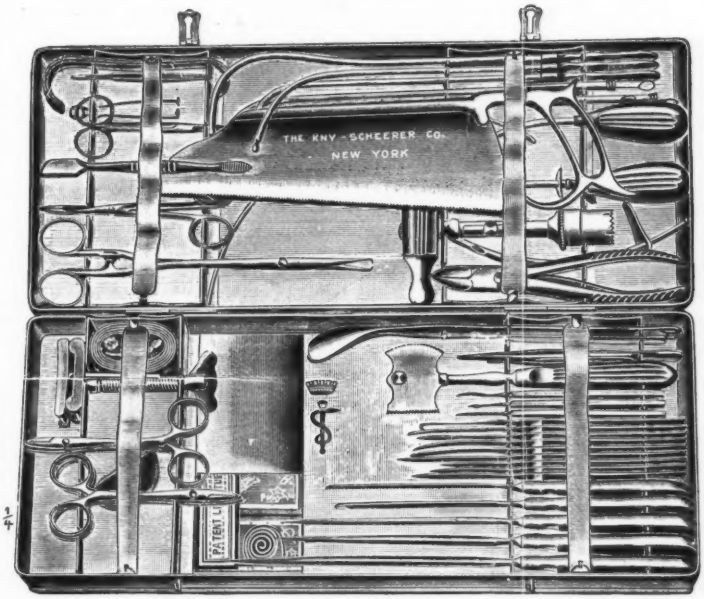


Fig. 2. Parker's Operating Set

The Surgeon's Bag—Fixed to Suit Individual Needs

Of these bags there are many sizes and styles put out by various manufacturers, but for my own use I prefer a suit case, or an old fashioned Gladstone bag, with its internal economy subdivided and arranged to suit my personal ideas. (Fig. 1.) Arrange the contents of your bag to suit yourself, put in pasteboard partitions, making a separate compartment or box for each article or group of articles, and this arrangement of partitions, when once you have got it just as desired, can be put into substantial metal form by any tinsmith.

A suit case or Gladstone bag enables you to pack a lot of stuff without piling things on top of each other, and the use of partitions not only provides a separate receptacle and place for each object, but allows you to remove any part of your outfit without disturbing the remainder. The major operating bag should contain:

General operating case; Parker's (Fig. 2), or United States Army (Fig. 3).

Canvas roll containing hemostats, scissors, forceps of various kinds, needle holder, and other needed instruments not found in the general case, the selection of which will vary with your individual likes and technic. (Fig. 4.)

Sterilized ligatures, sutures, drainage tubes, and other similar things, in containers.

Bundle of necessary sterile dressings for amputation of thigh or arm, with gauze retractor, sponges, and other essentials.

Bundle of necessary sterile dressings for amputation of the leg or fore-arm, with gauze retractor, sponges, and so on.

Packages of gauze, cotton, adhesive plaster, and so on.

Bandages—gauze, muslin and plaster paris

Operating gown, rubber apron, and gloves.

Enameled instrument trays.

The minor operating bag should contain:

Minor operating case. Fig. 5.

Roll containing hemostats, scissors, forceps of various kinds, needle holder, and so on. (This roll is the same one used in the major bag and is interchangeable.)

Hypodermic syringe and tablet case.

Skin cleansing equipment for surgeon's hands and injured parts.

Fig. 3. United States Army Operating Set

Antiseptic tablets, tincture iodine, alcohol, iodized gasoline, vaseline, solution picric acid, and so on, in suitable containers.

Chloroform, ether, and mask or inhaler.

Ligatures and sutures.

Bandages, adhesive plaster, cotton, gauze, safety pins in assorted sizes.

Bundle of necessary sterile dressings for minor amputations and wounds.

Operating apron, towels, rubber gloves.

Enameled pan for instruments.

With two such bags packed ready for instantaneous use the country surgeon is prepared to grab and run to meet any ordinary emergency. For extraordinary or unusual cases he can have ready within reach, Murphy buttons, tracheotomy tube, eye instruments, and others which may be called for sporadically.

For the treatment of fractures and dislocations there is a special bag (Fig. 6) which contains:

Plaster paris bandages, 2, 3, and 4 inch widths, and some loose plaster, all in the metal box in the bottom compartment.

Muslin bandages, 1, 2, and 4 inch.

Adhesive plaster; rolls, 1, 2, and 4 inch.

Splints or splint materials.

Bandages scissors.

Safety pins, assorted sizes.

Plaster-bandage knife or shears.

Salt in noncorrosive container.

Alum in container.

White cotton stockings, assorted sizes for primary bandages in plaster paris work.

Cotton batting for padding splints, and for other purposes.

The Obstetrical Bag

The obstetrical bag contains in addition to the usual requirements for such work the instruments and supplies needed for forceps delivery, repairing a lacerated perineum, curetment, tamponment, instrumental dilatation of the cervix, craniotomy and embryotomy. Cesarean section is a major operation which usually gives one a little time for preparation, and if the major operating bag is ready for action you will find therein all the essentials for an abdominal operation. Fortunately for both mothers and infants, modern science has made the Cesarean operation so safe that it has supplanted embryotomy, craniotomy, and other infanticidal "otomies."

Secondary operations or operations which are best performed at a time subsequent to the initial treatment, such as skin grafting, bone grafting, application of steel plates to fractures, and so on, are not regarded as emergency work.

Now for a Hurry-Call!

Everything about your equipment being ready, now for a bit of action.

"Ting-a-ling-ling-ling!" goes your phone.

"Hello!"

" 'Sthis Doc Jones?"

"Yes."

"Say, Doc, come out to Bill Brown's just as quick as you can get there!"

"What's the matter?"

"Huh?"

"What's the matter out there?"

"Why, they want you. Hurry up!"

"What for? Is somebody hurt or sick or having a baby or what?"

"O-o-o-h! One of the men got his arm cut off in a sawing machine!" And in two seconds you are busier than —, well, you order your team or auto brought around, jump into your driving clothes, grab your major and minor operating bags and your medicine case, and stand champing at the bit long before the livery man shows up. On such occasions it is *always* best to hire a driver as the work at the traumatic end of the trip will require that your hands and arms be in good shape and not tired, cramped, weak and trembling from handling a lively team or a jolting auto. You drive like gehenna and find that one of Bill Brown's men has suffered a laceration of two fingers.

Experience with many accidents has proved to me that messengers, telephonists and witnesses invariably get excited and magnify the extent of the injury, and while you rush out prepared to amputate a leg or arm, you more often find only a trivial injury to hand or foot. The sight of blood acts queerly on most people. However, do not grumble, for it does no harm to go prepared to meet any emergency.

The Kind of Accidents We Must Deal With

The accidents to be encountered in the country may be divided into village, farm and household risks, and these may be further classified as those subjected to home treatment and those brought to the doctor's attention. In the villages we find small machine shops and factories, the blacksmith shop, printing shop, flour and feed mill, wood-sawing outfits, grain elevators, creameries, cheese factory, the general merchandise establishment handling farm machinery, harness shop, the unprotected railroad station, trapping and fishing for the market, and many such industries not commonly known in the cities.

On the farm the risks involved are those incidental to the use of plows, harrows, cultivators, seeders, planters, harvesters, mowers, rakes and loaders, feed cutters and shredders, threshing machines, hullers, fanners, sorters, shellers, and so on; a combination of points, edges, cog wheels, belts and pulleys which cut, slash, crush, puncture and lacerate. There is usually a steady crop of foreign bodies in the eye and the careless farm hand, wandering child or "city jay" is not infrequently the victim of an animal bite, kick or sting, and even occasionally gets rolled on by a circumrotary equine, with consequent bruises, dislocation or fracture. Ditto with a precipitate unseating when riding a fractious or shyful critter.

Minor Injuries—Also, Injured Animals

Many minor injuries, capable of serious aftermaths, come from rusty nails, broken glass, old tin cans and similar factors which find lodgement in the yard because no wastebarrel is provided; also from the careless or injudicious use of tools. Explosions, either steam, gunpowder, or dynamite, are prone to render participants and innocent spectators *hors de concussion*. Election days, New Years, the Glorious Fourth and certain local holidays frequently give rise to pugilistic traumata. Every season presents a group of

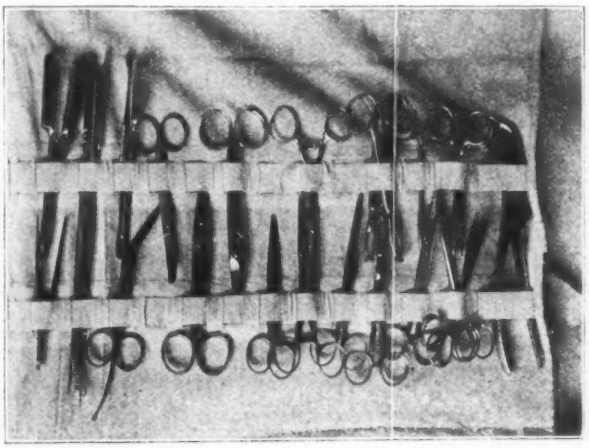


Fig. 4. Roll of Instruments

emergencies due to weather conditions; frozen digits and limbs, sunstroke, lightning stroke, cyclone casualties, and so on.

The veterinary element will creep into your work if there is no veterinary surgeon in your vicinity, and while many may look askance at the horse or dog as a patient, I never could

see any reason why an injured pet or domestic animal should be allowed to suffer merely because it is a dumb brute. I have ministered to the wounds of many such creatures in my time and I do not think my reputation,

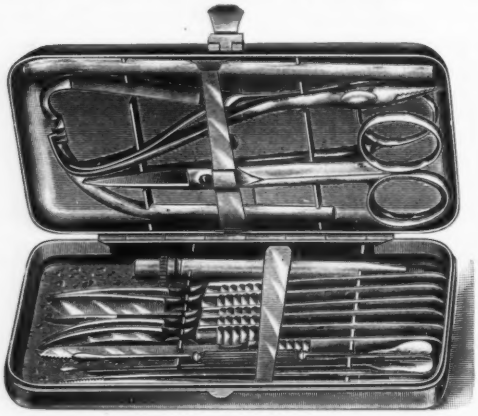


Fig. 5. Minor Operating Set

dignity or purse suffered thereby, and I feel morally certain that not a few of them were better entitled to help than some of the human animals I have been called upon to repair. Never refuse aid to an injured dumb animal; if you cannot help it, you can "euthanaze" it.

Most household accidents occur to children and women. There are burns and scalds, swallowing of coins, buttons and small toys, foreign bodies in the eye, ear, nose, throat, hands and feet. Accidental poisoning from medicines which have been carelessly left where children could get hold of them. Bruises, felons and minor cuts are common and sprains and epiphyseal injuries are more often met with in children than fractures and dislocations.

The drunken farmer who once mixed up with the cars at the railroad crossing has braced up and reformed and given way to the city auto fiend who is a stranger to the roads and the train schedules, and who tries to occupy the same space at the same time with the limited express. Railroad accidents are just about as frequent in the rural districts as heretofore, but the class of victims has changed. The gunshot injury is with us always, but legal restrictions have practically confined it to a few months in the year. The fishhook is a perennial source of revenue.

In conclusion, let me submit a few appendiceal admonitions and suggestions.

A Few "Don'ts"—and a Warning!

Keep cool! Don't get excited and do not allow the psychic perturbation of others to affect you.

Don't prognose! Don't volunteer a prognosis and don't give any definite one or make any promises if asked to do so. Say "try" instead of "can," and "may" instead of "will."

Don't hesitate to ask disinterested persons and even the surplus of those interested to leave the room, as they are always in the way.

Don't be too anxious to amputate. In my bailiwick is a man who was the victim of a combination of boiler explosion and too enthusiastic surgeon; he, unaided, walked downstairs and climbed upon a table to have his leg amputated at the knee. Today he says if he ever meets that surgeon again he is going to shoot him. Sing to yourself this paraphrase of the good old time Sunday school hymn:

Yield not to temptation
To make amputation;
Save all of the tissues
You possibly can,
Fight septic invasions,
Bad symptoms subdue,
Ask Old Nature to help you,
She will carry you through.

Relieve the Patient's Pain

Also you can help nature a little by relieving the patient's pain. Do not hesitate to

Fig. 6. Plaster Paris Bag

give your patient a hypodermic injection of H-M-C, P. D. Q., or if not prepared for that, give a half a grain of morphine sulphate with atropine 1-100 grain. Small doses are useless in the severe pain attending an injury and it is better to give one good-sized "dose enough"

at first than to be temporizing with repeated small doses which prove inefficient and irritating. The morphine can be followed by an injection of quinine and urea hydrochloride, which will prolong the analgesic effect for twenty-four to forty-eight hours, this practically eliminating all post-operation pains.

For emergency hypodermic use, time can be saved and sepsis eliminated by using ampules or hypodermic units; morphine, codeine, quinine and urea hydrochloride to relieve pain; strychnine and camphor for shock.

It is not always possible to sterilize instruments by boiling. For years I have been using mercuric cyanide for this purpose and have no cause for regrets. Get the tablets made after the formula of Dr. Ralph St. J. Perry, by the Eli Lilly Co.

The white cotton stocking referred to as being used for primary bandages in plaster paris work can be bought for ten cents a pair at any 5 and 10 cent store. Put a hole in the heel for the thumb and they can be used on the arm; cut the foot off and they will fit over a thigh or arm.

Iodized gasoline is made by dissolving scales of resublimed iodine in pure gasoline; make this fresh as needed and use it for removing grease, paint, and so on, from injured parts.

After each use of one of the emergency bags see to it *immediately* that every instrument is in its place and that any sutures, ligatures, dressings, bandages or other supply used in an operation are replenished. Only by this careful and immediate attention can you be always ready to "grab and run."

Some Accuracies of Practice

Correlating Precise Methods of Diagnosis and Treatment

By B. G. R. WILLIAMS, M. D., Paris, Illinois
Author of Williams' " Laboratory Manual"

EDITORIAL NOTE.—This is third in Dr. Williams' new series of articles, every article being of intense individual interest. and all dealing with the twin topics of accurate diagnosis and successful treatment. Read these articles carefully; they will make your burden lighter.

APPLYING the simple heat test to a specimen of filtered urine,we are sometimes surprised to see a rapidly forming precipitate redissolve as the urine boils, to reappear as the liquid again cools. This phenomenon is not simulated by serum-albumin or by the urates and phosphates. Once thought to be a proteose, it has been shown by Levy to be a true albumin.

It is found chiefly in multiple myelomata of the chest-bones and in blood diseases. Its diagnostic significance doubtless is very closely interwoven with tumors of the bone associated with anemias. Therapeutic indications are supplied by the blood picture rather than by the presence of the Bence-Jones body in the urine.

There are many other protein bodies the diagnostic and therapeutic aspects of which must be understood by laboratory-workers; but the above consideration will give an insight into the line of treatment suggested by the finding of the more usual ones.

The Significance of Glucosuria

The average practitioner regards albuminuria and glucosuria as *the* abnormal urinary bodies. This is a myopic view of the subject of uranalysis and its meaning to present-day diagnosis and therapeutics; but we must confess that glucose in the urine brings up some very important problems in treatment.

So far as diabetes mellitus is concerned, the polyuria cannot be combatted successfully unless we aim our treatment at the glucosuria. We cannot delve deeply into the theories of the dietetic treatment of diabetic glucosuria, but must pass on with a statement of some of the more important principles involved.

Usually the diagnosis is made when large amounts of glucose are present in the urine. It is important at the onset to determine the percentage of glucose in such a urine, in order that the efficiency of the treatment may be followed. Suppose this percentage to be 4. The patient is then placed upon a diet in which the carbohydrates are very closely restricted but not prohibited, inasmuch as sudden withdrawal of all carbohydrates may bring on symptoms of acidosis. Such a trial diet may be found in any good book upon therapeutics or dietetics and need not be detailed here.

Gradually the glucose should decrease to

3 percent, then 2 percent, then 1 percent; and if it fails to do so the carbohydrates may be reduced somewhat further, unless the case is acute or complications threaten. If the urine can be freed from glucose for several days, we may then cautiously increase the carbohydrates little by little, training, if possible, the economy to use these. Eventually glucose will begin to reappear, in which case we must again reduce the carbohydrates and make another trial. Persistency in this regard will enable us to build up a very liberal diet.

Such are the dietetic principles; but what of drugs? Early in the treatment, before we have commenced the "training" and are endeavoring to reduce the glucose, opium certainly is indicated. Observation in a large number of diabetics whose urines I have examined has led me to place considerable stress upon codeine sulphate; if well borne, 1-2 grain each two hours for the first few days of the fight. The first dose should follow the preliminary estimation of the glucose. I have also seen excellent results from the use of heroin hydrochloride used in a similar manner. This is the only group of drugs which I have seen to affect favorably the glucosuria directly until the dietetic treatment began to count. Hexamethylenamine has been advised by Forchheimer in cases where the alkaloids of the opium series fail after a fair trial.

Another remedy certainly of value is arsenic. It probably does not directly influence the excretion of sugar but rather helps the patient through improving his nutrition. However, there is no question that the arsenates and other arsenical preparations render real service.

When ready to train the patient to use more carbohydrates, we must not figure without the Eclectics' chionanthoid, 1 grain after each meal for long periods of time. The treatment, while strictly empirical, is not without value clinically, as I have observed in at least two very bad cases of diabetes.

In every case of diabetes mellitus, we must consider the intestines as well as the tissues; so do not forget the value of Bulgarian bacilli tablets in the treatment of glucosuria of this type. You have been told that pancreatin is not a specific for diabetic glucosuria; and this is correct. But medicine has survived many years, even if denied specifics.

I have observed beautiful results in the treatment of diabetic glucosuria, in which improvement began after the first dose of pancreatin was administered. "A coincidence" suggests the nihilist; but, try pancreatin, for this coincidence, when met, is a happy one. Then, too, I have seen obstinate constipation in diabetes relieved by pancreatin, never to return—but this has nothing to do with indications suggested by the uranalyses. Finally, I have seen pancreatin fail; but this only convinces me that it is not a specific, but does not prove it without any merit. If there is any one class of patients that I have come into contact with during the past few years, it is that of diabetics. One lesson has been impressed upon me—*treatment must be aimed directly at the glucosuria.*

It must be remembered that the depleting and exhausting polyuria does not only vary directly with the intensity of the glucosuria, but the total amount of daily urine depends directly upon the number of Grams of glucose excreted in the twenty-four hours. Glucose is a true diuretic; in fact, certain cases of oliguria have been treated by injecting glucose serum.

For a full discussion of treatment, see Dr. W. C. Wolverton's excellent articles in recent numbers of this journal.

Let us turn to a consideration of the non-diabetic glucosurias. It is not unlikely that normal urines contain traces of glucose, but these small amounts are not detected by the ordinary clinical tests.

And this brings up the question: "How sensitive are these clinical tests? Do they determine pathological glucosuria in all cases?" It would seem that they do not, though Benedict's test is somewhat more sensitive than Fehling's. Either may suffice in questioned diabetes mellitus and the temporary glucosurias owing to the abnormal ingestion of carbohydrates; but when dealing with diseases of the pancreas, we have recourse to the method of Cole, a reaction which distinguishes between normal and pathological amounts of urinary glucose. It depends upon the absorption of nonsaccharine reducing substances by charcoal thus permitting the use of the sensitive solutions. However I have found the fermentation tests and Benedict's test extremely delicate in some of these problems.

Pentose—and an Amusing Experience

Now and then pseudo tests may confuse the worker. In cases where we are dealing with considerable uric acid, fermentation-tests will determine whether or not glucose is really present. Sugar reactions in urines submitted to laboratories in triturate bottles must be interpreted with extreme caution (lactose).

In my book upon "Laboratory Methods," I have called attention to certain instances where patients tampered with the urine samples, the intention apparently being to deceive. Lately we ran across a remarkable specimen that might well have been recorded in the series entitled "Laboratory Curiosities" that appeared in this journal two years ago.

The young ladies of a certain vicinity, when sending urinary specimens to our laboratory, fell into the habit of adding to these a few drops of eau de Cologne. This was delightful; for instead of the usual and natural "aromatics," our chemical parlors were now graced with rose, violet, and heliotrope! And then it all ended, for along came one of those samples which drive a laboratory man insane, a high specific gravity, with nothing to explain it, until eventually we found cane-sugar. What esthetic notion should have induced this person to add both perfume and sugar has never been clear to me. The laboratory-man, as a rule, prefers his "without."

But now and then we have to deal with the presence of other saccharine reducing bodies, chief among these the pentoses. The worker fails to observe a positive Fehling or Trommer reaction, and is about to discard the sample when he notes that during the cooling of the mixture the blue color is slowly discharged and yellow cuprous hydroxide formed instead. Fermentation-tests are negative. Just uric acid? No. Specific reactions will show the body or bodies to be of the pentose group.

Pentose has been observed in diabetes and in diseases of the pancreas. Idiopathic pentosuria must at present be regarded as a pathological curiosity rather than a condition calling for special treatment. These cases usually are diagnosticated quite by accident.

Bilirubin and the Treatment of Jaundice

The usual methods for the detection of bilirubin are too crude for diagnostic purposes. The foam test is much more reliable than the nitric-acid test. In cases of question, I use the Hammerstein-Nakayama method exclusively; a rather complicated procedure but one that will detect 1 part of bilirubin in 1,000,000 parts of urine. And bilirubinuria, though not marked, always is to be regarded as a pathological finding.

The presence of greenish or yellowish renal cells in a specimen of urine should lead us to suspect and search for bilirubinuria.

Time was when the biliary acids or their salts were supposed to be the toxic and otherwise important factors in the causation of those morbid symptoms coincident with the entrance of the hepatic excretory products into the blood. But these are rarely or never demonstrated in considerable quantities in the urine. It has been with considerable relief, therefore, to the diagnostician that these older views have been proved incorrect, and his attention directed to bilirubin.

Waste hemoglobin is excreted by the liver, reaching the bile capillaries as bilirubin (hemoglobin minus iron), a pigmentary body that is a true poison. Normally it passes into the intestine and away from the body. But in certain pathological processes which my readers understand, this toxic body not only passes into the bile capillaries but likewise into the vascular and the lymph passages, thence into the general circulation, and is eventually excreted—mainly by the kidney.

Once a part of the hemoglobin molecule and favored in chemical physiologic processes, bilirubin is robbed of its iron and cast aside as a waste product. Entering again into its former domicile, it is regarded as an enemy, and a fierce battle is waged. Some of this bilirubin, notably in icterus neonatorum, may be thrown into the tissues in the form of crystals and disposed of at leisure by their cells. Then, too, antibodies are formed, else death would quickly result; for it has been shown that a man excretes enough bilirubin in twenty-four hours to kill three of his weight. It is six times more poisonous than the toxic substances of the urine.

However, bilirubinemia is a pathological condition to be reckoned with, for all of the bilirubin is not neutralized; and this uncombined part actively destroys many cells, especially the hepatic cells (this leading to urobilinogenuria), the erythrocytes (leading to erythrocytolysis), and the cells of the uriniferous tubules (toxic desquamation into the urine).

I cannot take the time and place, in this paper, to go fully into the symptomatology—the mental depression, irritability, nightmares, fits of anger over trifles, headache, giddiness, itching, and more of the kind—since it would lead me too far.

Bilirubinuria is proof of bilirubinemia; and it is this that we wish to treat. How? I think that I hear you murmur, "Call a surgeon." Not so. Many of these cases fall into the department of internal medicine.

The trouble lies with the diagnostician, for many cases of bilirubinemia go undiagnosticated, or they are discovered late, when already the bilirubin occurs, not only in the urine, but is being deposited in the skin. I have reference to these cases where the bile

capillaries, or the hepatic perenchyma rather than the ducts, are involved; for in the latter case the surgeon must help us out.

How are we to treat the early stages of angiocholitis, catarrhal jaundice, cirrhosis of the liver, and so on, before symptoms and signs make it obvious even to the layman that we are dealing with a disease of the liver?

We know that most of these early cases are aided by proper attention to the bowels, not only to the colon but to the entire intestinal tract. Thus, we must not limit our treatment to the use of laxative salines (although these will help), but must employ remedies aimed at the upper gut, choosing especially podophyllin, with or without the bile salts, and alternated with juglans and quassia. Cascara, phenolphthalein, and other like purgatives will not serve us so well here.

This treatment should be followed early by the use of the salicylates, or perhaps better by the use of sodium succinate and chionanthoid combined with calomel and podophyllin, of each of the latter 1-6 grain, repeated four times (a dose each half hour) before retiring; followed in the morning before breakfast by a flush by means of a saline draught. Once the bilirubin is driven from the urine, it is well to continue with small doses of bile salts for several weeks (to give tone to the parenchyma).

Remember, in these bilirubinurias, to determine the possible relation of the typhoid bacillus (carriers) and of the treponema (hepatic syphilis) and administer a typhobacterin or mercurials as warranted.

Urobilinogen and its Peculiar Significance

Under this caption, we come to a very absorbing subject. The liver has been accused in many diseases in which it really played no part, and it has been overlooked where later exploratory operation or autopsy has shown it to have been to blame. I cannot go deeply into the diagnostic information furnished by the detection of urobilinogen in the urine, but will merely give in brief its significance and therapeutic indications, quoting extensively from a former article which I prepared for *The Medical World* (December, 1912).

Neubauer and others have shown that Ehrlich's modified diazo reaction is, in reality, a test for urobilinogen escaping into the urine. In health, this urobilinogen is "worked up" by the liver parenchyma, and cannot be found in the urine; but in certain diseases much of it escapes before being properly altered. The modified diazo reaction was formerly thought to be proof of typhoid infection, but now we know that it occurs in such cases of typhoid fever as are associated with injury to the liver.

It would appear that uninjured cells of the liver are able to compensate in part for those which have been destroyed or weakened. Thus, urobilinogenuria may fail to be present in a certain local and severe disease of the liver, whereas it may be marked in a milder condition but in which all or most of the cells are involved; for example, angiocholitis, hepatic syphilis, cirrhosis, passive congestion, and so on. The disease need not be a primary liver condition, the meaning of urobilinogenuria being that of hepatic injury of a general type, either primary or secondary, *but hepatic injury nevertheless.*

Obviously, we must expect best results in treatment when we aim at the cause; but, as I have said, differential diagnosis cannot be undertaken here, inasmuch as a large chapter could be written upon the interpretation of urobilinogenuria, so we must be content to speak of the treatment of urobilinogenuria as such. The diagnostician will also determine the presence of syphilis, passive congestion, and so on.

The indications by no means are those supplied by bilirubinuria. Purgatives are not indicated by urobilinogenuria as such. Usually they are contraindicated, or should at least not be severe, for invariably the urine is concentrated.

It is probable that any drug which stimulates to action a given type of cell will increase its functions in general. We know that the liver has several functions; and we have reason to believe that each unit contributes in part to these several functions. That is to say, each liver-cell aids in the disposal of waste hemoglobin, in the elaboration of urea, and in the storing of sugars. Each cell, furthermore, aids in the disposal of urobilinogen. Stimulate a liver-cell, and it is quite likely that it not only will dispose of hemoglobin more rapidly and completely but will store sugars with a vengeance, perfect the urea molecule more easily, and let less urobilinogen slip by unaltered.

No less authority than Cushny has made the statement that "bile is the only reliable cholagog known . . . . . and the constituent which acts upon the secretory liver-cells seems to be the bile-acids . . . . . and it would seem that they exercise some specific action on the secretory cells."

If in this assumption Cushny and other

authorities are correct, it would seem that all urobilinogenurias call as loudly for bile-acids, or their salts, as do faltering heart-cells call for digitalin. As a matter of fact, I have witnessed the administration of bilein in cases of urobilinogenuria followed by remarkable results. The experiment certainly is worthy of further trial.

Remember, however, what I have said concerning the treatment of the cause. Such cause is to be worked out in connection with other laboratory findings, symptoms, and signs. I have given much time in my book to the technic of the test, so, shall not repeat the directions here.

Urochromogen—Another Interesting Pigment

There is a temptation to enter a discussion of the normal pigments of the urine and of their variations in disease, but space limitation forbids.

Urochromogen is to be regarded as a possible precurser of other urinary pigments and never is found in strictly normal urine. The urochromogen reaction is held by Weiss and others to be a part of the diazo reaction, and even precedes the latter. Urochromogen is noted in late pulmonary tuberculosis, and is of prognostic rather than of diagnostic worth. It seems to indicate that the case is hopeless and argues against further use of tuberculin (if such has been administered up to this time) warning the physician that continued injections may actually hasten death. Hence, we are to speak of the urochromogen reaction as a contraindication rather than an indication to certain therapeutic measures.

The test will not yet be found in books upon laboratory methods, and, so, is here given in brief.

Fill a test tube one-third with the clear, fresh urine; then dilute it two times and separate into halves. Add to one of these halves 3 drops of a 1 : 1000 solution of potassium permanganate; mix thoroughly and compare with the other half. A yellow color is regarded as a positive test.

Hemoglobin: Its Meaning in the Urine

In the beginning, two types are to be distinguished; namely:

1. Where hemoglobin is released into the blood (hemoglobinemia) by the action of certain poisons, as, anilin, chlorates, carbon monoxide, snake venom, and so on; and by certain infections, as malaria, syphilis, and so on. In these cases, diagnosis must depend upon the chemical tests, inasmuch as red cells usually are absent or few in number. These are the *true hemoglobinurias*, and they demand treatment based upon different principles from that of the class to follow. Thus, in syphilis the iodides are strictly indicated; but they would not be if the hemoglobinuria were owing to the abuse of headache powders or the use of other hemolytic poisons.

2. Where hemorrhage occurs in some part of the urinary tract, as in the various nephritides, painful oxalurias, tuberculous infections, calculi, malignant neoplasms, and so on. These are the *true hematurias*. However, for the reason that the hemorrhage may occur high in the tract, because of the osmotic influences exerted upon the erythrocytes by virtue of urinary concentration or dilution or for other reasons, much or most of the hemoglobin has been released from the cells, which latter appear crenated or as ghosts. By careful microscopy, true hematuria and hemoglobinuria usually may be differentiated.

Hematuria (ofttimes with secondary hemoglobinuria) may be treated as such, though the cause must be removed if possible. These causes have been mentioned above; but now and then a cause cannot be determined. In these confusing cases, the escape of oxygen-bearing protein may not be inconsiderable. In such instances, we must not be at a loss for remedies.

When hemorrhage from the urinary tract is profuse, absolute rest in bed is necessary. In the desperate cases, we would add to this morphine sulphate injections, an ice-bag over the probable seat of hemorrhage, and so on. Of course, all of these recommendations cross the borderline into symptomatics, but they must be applied in part in order to obtain results in the occult hematurias determined in the medical laboratory.

Now and then we run across hemoglobin in the urine when least expected. The urine may not be red, or else such color is obscured by pus or pigments other than hemoglobin. Thus, I have in several cases ascertained the cause of puzzling anemias. I am certain that the routine test for urinary hemoglobin is too frequently omitted, even in our best clinics. Strange, is it not, when we note that so much attention is given to explaining disease by virtue of the escape of traces of hemoglobin by the bowel?

Careful tests usually will reveal a decided lengthening of the coagulation-time of the blood. Whether this is true or not, the physician never should overlook calcium lactophosphate; calcium being one of the

factors favoring more rapid coagulation of the blood and thus arresting hemorrhage. Perhaps coagulation is delayed because of the absence of certain ferments. Thus, cessation of the bleeding may follow the use of normal horse-serum. Do not neglect the use of calcium lactophosphate and normal horse-serum when the laboratory expert who does your work reports hemoglobin, even though it has been found only in traces.

Shun the use of digitalis, camphor, ergot, epinephrin (unless this can be applied directly to the bleeding surface), stypticin, and so on, as their use has no rational basis. Empirically, I have seen some beautiful results from the administration of oil of turpentine; though caution should be used in the case of nephritics.

Again let me warn you not to forget to treat the cause. In painful oxaluria, follow the advice that will be given under this heading. In probable infections, do not forget hexamethylenamine. Correct hyperacid or alkaline urines. Look into the question of tuberculosis, syphilis, stone or cancer. Fall back upon the surgeon, if necessary; for many of these cases, though not all, by any means, can be relieved only by operative interference. Roborant medication must not be neglected where the resulting anemia is marked but the indications are supplied by symptoms and blood examinations rather than by uranalyses.

Indican—A Sign of Proteid Decomposition

The presence of indican in the urine indicates proteid decomposition at some point in the body. Many men have ventured the opinion that indican is not always to be counted an abnormal constituent of the urine; arriving at this conclusion because they have not always been able to find the focus of decomposition. In the great majority of cases of indicanuria, but not in all, the colon may be held to blame, for indicanuria is not uncommonly met with in hidden local infectious processes (tonsils, teeth, nasal sinuses, lung cavities, and so on), and in the degenerative processes associated with malignant new growths. However, most cases of indicanuria may be successfully combatted by proper attention to the bowel.

I need scarcely reenter into a consideration of this question, which we have studied so carefully under the head of bowel-acidemias. The treatment is identical; in fact, indicanuria usually is proof of the excessive formation of poisonous acids. The urea precursors may have neutralized the acids in part, but nothing is present to care for the telltale indican. Red indican may be found instead of the ordinary form, but therapeutic indications are not altered in consequence.

Indolacetic Acid

This is one of the poisonous acids formed not only in the putrefaction of proteid foodstuffs in the colon but in tissue decompositions. The therapeutic indications are those for the acidemias. Other acids less easily identified are those of the sulphur series, hydrocyanic acid, paraoxyphenylacetic acid, and paraoxyphenylpropionic acid.

Diacetic Acid

Gerhardt's test, as modified by adding the urine to the ferric chloride, is used for detecting diacetic acid, and it will be of service in routine work. When dealing with mere traces, we must fall back upon some of the more complicated but sensitive tests.

This body is more commonly met with in acidosis than in acidemia, and is a derivative of betaoxybutyric acid, the cause of diabetic coma. The finding of diacetic acid in diabetes, especially if there is enough to give a Gerhardt's reaction, calls for the vigorous use of alkalis, as well as for the general measures applied in all diabetics.

Diacetic acid should be found in the urine before the onset of coma, for after its appearance it is useless to expect good results from the alkalis. In fact, routine diacetic-acid tests are quite as imperative as routine glucose estimations.

These patients will, as a rule, drink large amounts of water. If possible such waters should be alkaline (Vichy, Neuenahr, and so on). Sodium bicarbonate should be given in large doses by mouth; or in the desperate cases it may be given by rectum or intravenously. By mouth, not less than 10 Grams should be given daily; many times this quantity if possible. The object is, to render the urine alkaline. If symptoms of coma are not already present, this usually is possible. By rectum, 100 or more Grams should be administered and retained. If the case demands intravenous injections, a liter of sterile 2-percent solution in physiologic salt solution may be given four times during the twenty-four hours. These cases demand cathartics, especially the saline flush.

Diacetic acid may occur in the urines of others than diabetics. It may or may not be accompanied by acetone. It is quite likely to be found in any case of "carbohydrate starvation," whether this be owing to the

inability of the tissues to use the glucose supplied, or whether, as in postanesthetic vomiting, appendicitis, pregnancy, and so on, the tissues are willing enough to use the sugars but these have not been supplied (diet before anesthetic usually is meager), or, if supplied, have not been assimilated by the portal circulation (appendicitis). In consequence, proteids or fats are broken up instead, and poisonous remnants result.

In the postanesthetic cases, diacetic acid in the urine may be avoided, or else the treatment becomes a very simple matter—merely feed the patient simple sugars. If because of vomiting or other reason these cannot be taken by mouth, they may be given by high rectal injections. In appendicitis and like conditions associated with urinary diacetic acid and vomiting, the portal system cannot properly assimilate the simple sugars, because of the coincident perityphlitis, and the tissues fall back once more upon the proteids or the fats. Here proper surgical interference is the rational treatment.

The next article will treat of the "Indications Suggested by the Quantitative Uranalyses."

The Economic Efficiency of Medical Partnerships*

A Story of Successful Cooperation

By F. E. WALKER, M. D., Hot Springs, South Dakota

EDITORIAL NOTE.—"How can I increase my income?" This is a question thousands of physicians are asking themselves. One way of doing this is by cooperation—"getting together" with other physicians for mutual advantage. Dr. Walker explains how he and others made such a plan profitable for all.

THE rapid advance of specialism in medicine and in surgery during the past ten years has effected a very marked change in the practice of our profession. The individual who wished to specialize, but who did not live in a city where the services of other specialists were available, was unable to cope successfully with the changing conditions; and as the clientele of the specialist was becoming more familiar with the progress and possibilities of medicine and the popularity of specialism grew, a demand was created for more detailed examinations and treatment. As a result of this change, it became necessary for the thoughtful practitioner engaged in a specialty, particularly if surgical, either to perfect himself in *every* branch of medical science or to surround himself with other men specializing in other branches.

Recognizing the impossibility for one man to grasp and retain in full, or even in major part, the many applied branches and divisions of this science, I decided, after long study, to form a company or corporation which should include the different branches in such a manner as to cover the field concisely and inexpensively in accordance with the growth and development of my business.

*Paper read before the North Shore Branch of the Chicago Medical Society, December 3, 1913.

Many plans were thought of, many medical firms were investigated, and a very considerable correspondence was carried on. In this way I found that a large number of firms were in existence, but a close examination proved that the most common plan of medical organization followed throughout the country was not remunerative to the firm, its members, or its patrons: so many firms of two, three, four or five members were conducting a business along practically the same line of specialization as that of each of its members, and all were apprehensive of poverty whenever a suggestion of discontinuing their individual general medical practice was made.

It did not appear practicable for me to assume the role of a surgeon and at the same time take in new men who wished to become known as surgeons only. Such undertaking would cover but a comparatively small field of work, and that only surgical; and this did not seem to suit the purpose for which the proposed organization was planned.

The Prime Considerations

I reasoned that, at the outset, the following facts must be borne in mind, namely:

1. That the field of activity itself be carefully considered.
2. That the amount of capital invested in the business must yield a fair return.

3. That the concern must be well housed, well equipped, and placed upon a sound business footing, and with enough men specializing in different branches of medicine to give all the benefits that could be secured in a large city.

The diagnosis and treatment of numerous ailments demand the attention of one especially skilled in their pathology; they require a careful history of disease-conditions originating within the parts of the body, the functions of which are best understood by the one who is trained in that particular department of medicine. It follows that a number of specialists, each assuming a particular field of work, by association and conference could render skilled service to every demand made upon them by any particular patient.

In such a partnership, then, it would be advisable—yes, imperative—to have every regular branch of medical practice represented, so that the patient in no case would be put to any unnecessary expense by reason of numerous examinations and costs of travel, and that he might, without loss of time, be under the care of those capable of advising him, and receive treatment for any pathologic conditions from which he might be suffering. It also seemed to me that a hospital connected with such a firm would be better patronized and more able to maintain a higher class of equipment as well as show a much lower mortality rate. And, as a further consideration, the cost that such a partnership would incur, should, of necessity, be less than the maintenance of separate offices by each one of the physicians concerned, because under such a properly constituted organization the expenditures for reception-rooms, laboratories, attendants, bookkeeper, electricity, water-service, heating, operating-room, and all that would be reduced to the minimum, while simultaneously there would be a corresponding increase in business because of the improved and less expensive service offered.

A community served in this manner would enjoy the same prestige over others of like or even of five or ten times the size having even better transportation facilities or where there were a number of medical specialists located in different parts of the town.

A Disease "Clearing-House"

Such an establishment, it seemed, would at once be recognized as a "clearance-house" for all diseases, a sort of wholesale health-center and terminal point for all afflictions, a national bank of issue for certificates of health and wellbeing, a Mecca for sufferers from any kind of physical ill. It likewise would, in itself, be an asset to the community and an advertising-feature that could not be assailed from any ethical standpoint, and, above all, a business proposition which, if conducted correctly, would prove of great financial benefit to the members of the firm.

I felt, too, that the association with several medical men in the practice of their respective specialties would be a source of great strength to each one, directly and indirectly, and that this, again, in itself would become to the public an indorsement of the ability of each member by all the others so interested. It would insure to the patient the intelligent, sincere, and studied attention of every associated member of such a firm and would be especially beneficial during the period of absence of any one of the physicians. With careful histories and records furnished through personal investigation by the physician, a practically unbroken line of treatment would be at hand at all times, and at least one, if not more, of the members of the firm would be thoroughly familiar therewith.

Again, it seemed to me that the constant realization on the part of the doctor, that his work would be always under the critical eye of those understanding its nature, would be a continual spur to him to do his best. In other words, he would not be so liable to fossilize as when isolated in his practice.

If the reliability or standing of a banking-house is advanced by the number and the financial responsibility of its officers and stockholders, and if concentration of its financial interests tend toward increasing responsibility and efficiency so combined, then, naturally, associated talent of any kind makes for greater results in every effort to which it may be directed.

Furthermore, with several associated members cooperating as one firm, each would find time for needed rest from labor and for study-trips, without material loss of business, and with the added advantage of each one profiting by the very extent of his vacation and the study-periods with his associates.

What Is Necessary in Medical Partnership?

In order to insure success of such a medical partnership, two factors are essential, namely:

1. Men who are legally and naturally qualified to practice medicine.

2. Men who will command the respect of the community in which they wish to engage in practice, and whose personality will not

only give good service but will increase the business.

3. Men capable of recognizing a disease when confronting them, and who are provided with the necessary equipment to aid them in arriving at correct conclusions.

4. The requisite skill and knowledge as well as experience to supply suitable remedies and to perform necessary operations looking toward relief.

5. Conditions such that at all times, under reasonable restrictions, these doctors be accessible to their clientele.

6. Men of sympathetic temperament, understanding the financial conditions of the public, and willing to grant their services for reasonable compensation, and also be just as willing to give without charge their services to those worthy of charity.

The Financial Aspect of Medical Practice

It is not necessary for me to speak of the lack of business-acumen and financial knowledge among students of medicine, and it is a pitiful condition existing among our graduates that they enter the practice of medicine expecting to secure profits and then fall into the same channel of business losses that has been so characteristic of the profession from time immemorial. Some day, I hope, every medical college will have lectures upon the business side of the profession and give the new men entering the field proper ideas and suggestions upon the business side, and especially the financial side, of their work.

I believe the financial side of the business of practicing medicine should be studied just as well as the professional, and scientific sides. Every prospective doctor should understand that connected with the business there always has and always will be a certain amount of charitable work to perform, greater perhaps than in any other profession in which he may engage.

Realizing this fact, it becomes his duty to insist upon a fair remuneration for his services from those who are able to pay, and in order to obtain this fee he should be as particular regarding the taking of his patients' financial history as he is in obtaining their physical history. This being done, the rest is easy. He should demand prompt payment, and then live within his income. If he cannot do the latter, he should get into some other line of business. This, however, a doctor seldom does unless he loses confidence in himself or fails in health.

A man should be sufficiently grateful to his physician for services rendered to ask him in regard to the remuneration he desires and then try to satisfy all his just demands; but so long as a great majority of patients are afflicted with lack of appreciation and a marked tendency toward forgetfulness of their obligations, it becomes the duty of the philanthropically inclined physician to supply remedies to correct the conditions.

I was struck rather forcibly upon investigating partnerships to find that a number of such partnerships carried the element of professional jealousy; and this was one phase of the partnership which I desired to obviate. And here I will say in passing that during the period of four years of our present method this element never has entered into my own mind or that of my associates. Each man is distinctly individualized, assisted and encouraged, and no one is allowed to overstep this distinctly individualized line.

How the Firm Was Started

With these preliminaries well formed in my mind, I decided that my location—Hot Springs, South Dakota—was as good as I could find anywhere, although we did have many local obstacles to overcome. However, the great advantage lay in the fact that Denver and Omaha, while approaching nearest to what might be termed medical centers, were each several hundred miles distant from Hot Springs, and our nearest competitive hospital was more than one hundred miles away. Also, the population adjacent to Hot Springs was sufficient to maintain in itself an organization such as I had in mind. This was evidence enough to convince me that I should be satisfied to make an attempt.

Therefore, I sold a one-third interest in my business to Dr. P. T. Geyerman, of Minnesota, and we undertook the erection of a strictly modern medical office-building of twenty-two rooms; the first floor having a large reception-room, four office suites, and a general manager's office; the second floor having three suites of office rooms, a stenographer's room, a laboratory, library, developing-room, and reception parlor. This ready, we secured the services of an expert electrotherapeutist and radiologist, a specialist on eye, ear, nose, and throat diseases, a dentist, and an internist capable ofattending to the pathological laboratory.

Our initial expense of building and equipment constituted an outlay of practically $20,000, and our first year's expenses reached the sum of $8424.94. I had already secured the exclusive use of the Sisters Hospital, which at that time had about thirty beds and

seven nurses. We moved into our new building, and, after adjusting ourselves to our new environments and conditions, we gradually perfected our business arrangements, soon finding the patronage increasing in a most gratifying manner. Next we instituted a training-school for nurses. Also, the Sisters erected an addition to their hospital, which now has accommodations for nearly one hundred patients. In our training-school we have at the present time some twenty nurses, while last year we graduated our largest class, consisting of ten pupils.

The Business Arrangements

Our departments were divided as follows: surgery and gynecology; kidney, bladder, and rectal diseases; eye, ear, nose and throat; internal medicine and pathology; oral and dental surgery; x-ray and electrotherapeutics.

We employed a business manager, to look after the accounts, to draw up all legal documents, to assist in placing our business upon a sound footing, following as nearly as possible the banking system. This man's duty consisted in keeping the books, in securing negotiable notes, looking after the collection of all accounts, reducing the expense, attending to patients, and having entire charge of the legal department and the purchasing of all materials both at the hospital and office.

With the exception of the dentist, each man was placed on a salary, and a contract was given which allowed him a certain percentage of the business of the firm and the individual increase by reason of his proficiency and his ability to draw new business. The dentist paid us for his rooms, we furnishing all service connected therewith. A stenographer was employed for general purposes and is available to each physician.

Our general manager immediately placed the business upon a sound footing, with the result that we found it possible to collect accounts and to reduce expenses; which not only gave us a corresponding increase of income and decrease of outlay, but seemed to have a most salutary effect upon our patients.

So, because of this gentleman's management we were able during the last twelve months to reduce our total expenses by over $400.00 and to increase our receipts of old accounts 23 1-2 percent over the year of 1912 for a corresponding period.

We do not take any calls outside of the office or hospital; we do not carry on any insurance business of any kind whatsoever; we do not have or hold any position with any railway or other corporation; we do no obstetrical work, save the few cases which enter the hospital; and our office-hours are strictly adhered to, and only urgent appointments are made for Sundays. We have not attempted to secure any business in a social or religious manner or through lodge attendance, but rely strictly upon our ability and individual as well as collective merit.

Details of the Medical Work

A history is taken and a preliminary examination is made by our internist of all patients except those who go directly to the hospital or those especially urgent cases requiring attention by any one or all the men in the office.

The internist visits the hospital every morning and is present at all operations except minor ones, making his own notes and introducing these notes at our evening conference each week. From the hospital he goes to the office and there continues the taking of histories, except the histories of eye, ear, nose and throat, and dental patients. He continues this during the afternoon from two to four o'clock; and when not occupied in this manner, he attends to the laboratory work and is called in conference and consultation upon such cases as may be required.

The history and the urinary and blood examinations are made out, and in the afternoon from two until four the patients return to the office and are examined either on the same day or the day following, depending upon the condition as well as the number of patients which can be seen. We make it a point to give each patient plenty of time, although it often happens that it is impossible during busy periods to see some patients for some time, which may be from one to three days.

Such patients as require surgical treatment are sent to the hospital, and a nurse there takes the history again, which is kept on record at the hospital together with all operative and postoperative notes. The careful history is kept in a proper file at the office, together with a copy of the operative and hospital histories.

The Result

1. Under the system which we have, each physician is living a professional life, is strictly adhering to his specialty, and has time for recreation, investigation and study.

I believe it unjust to the public for one to assume the role of specialist and then practice

general medicine on the side; and it seems to me one cannot give his best energy and skilled services in any other manner than to devote all his time and attention to the specialty he has chosen.

2. As an organization, we have received a great stimulus in our ambition to grow better, while our scientific work has given us a far better hold upon each other, has increased our confidence in each other, and has perfected a system of examination, of treatment and rapidity in surgical work which we believe cannot be obtained by any coterie of men under any other system; and, further, we have enjoyed the social side far more than if we maintained individual offices.

3. Our field is increasing, owing to several facts, namely:

a. The plant which we have built and equipped is comfortable, homelike and simple, and shows evidence of the stability of our enterprise and that it is an institution of permanence. This we have found to be one of the most important factors in securing the confidence of our patients.

b. The systematized examination of patients, the careful recording of histories, the permanence of treatment, and the careful, honest, honorable intention, not only of the physician, but of all associated, instills within the mind of the patient the feeling that a conscientious effort is being made to relieve him of his ills.

c. We carry on a correspondence with our patients after their leaving, showing them that we are interested in their continued welfare, and in this manner we secure their interest, confidence, and esteem.

d. We do not allow internes in the hospital, but each patient is looked after by competent and well-qualified physicians who have had extensive medical practice.

e. The financial transaction is carried on with a great deal of care and judgment by ourselves, and especially by the clerk, and it is our endeavor so to approach our patients that they not only regard our services with feelings of gratitude, but that it is a matter of business for them to get well and that we are selling them good health; that it is a strictly business proposition and should be looked upon in that manner. We find this system producing increasingly better results each successive year, and, surely, those who return to us for further treatment come prepared to transact business as they should; and in no instance can I recall that we have lost any patient by reason of our methods.

f. I believe it a law of philosophy that "concentration is power," and the fact that all who come to us realize that in one building are a number of men working in harmonious cooperation for their good; that these men have spared no expense in furnishing and equipment; that services can be secured either there or at the hospital at any time; that they are being looked after by men who are specializing and who, in the aggregate, represent concentration and specialism; that here they can find the very best place to go for the alleviation of their bodily ills.

g. We are educating our clientele to these facts, and, as the average patient going to a medical center comes from the rural districts, it is possible for us to show him that in this particular city we have a medical center comparatively easy of access, free from noise, turmoil, dust, dirt, smoke, and other irritating influences of a large city, and, best of all, that he will have, as long as he continues treatment, one or more, or all, of the physicians of this organization for one fee, and that no untried or immature medical men will be allowed to have charge of or in any manner whatsoever treat him.

4. Our general expense is decreasing, while our income is increasing at a ratio of about four to eleven. That is, while we have an increasing business each year, yet, we have been able to reduce the expense because of a saving in many things and, therefore, are able to conduct the increasing business at no additional cost.

5. We have no competition as a medical organization anywhere near us, although one was started in a city some distance from us in our state; but the fundamental principles of their organization were wrong and the organization lasted but a short time. If they had conducted their organization on better principles, they could not have secured a better location. We do not fear competition. It would be impossible for another similar organization to form in our city and destroy us or in any way harm us, and this for the following reasons:

(a) It would involve a large expense. (b) It would take several years for them to make expenses. (c) It would be necessary for them to build a new hospital or to have some society or organization build one for them, and, as the hospital facilities are good at the present time, it would be a matter of many years to educate enough new patients to make a new hospital a paying proposition. (d) The amount of money which we bring to our city because of our organization and hospital is appreciated by all of our business people

and, therefore, they would not look with favor upon such a movement.

6. We are satisfied with conditions, because we have been successful, the outlook is much more promising, and, while we expect to make some minor changes, we believe our present organization is based upon a foundation strictly safe and conservative and cannot well be improved.

7. It is a well-known fact that a medical practice of five, ten, twenty, thirty years' standing in one community is an asset of no particular value, even though the physician who has practiced in a community a number of years and has built up a large and successful practice, if he desires to dispose of his business, it is worth only the amount which the prospective purchaser is willing to pay. In looking over one hundred "practices for sale" in the American Medical Association *Journal*, I find that the average purchase price asked is $775.00.

However, with our kind of organization, the asset is a far different matter. If I desired to sell or if my associate desired to sell, or if we both desired to sell, we could turn over a business which would go on practically uninterrupted.

To illustrate: From about the 28th of December, 1912, to September 1, 1913, I was so ill as to be unable to do any work. During these nine months I was away from Hot Springs practically all of the time, yet, on the 1st of July, 1913, our hospital records showed that we had an even 100 more patients the first six months of 1913 than during the first six months of the same period of 1912. Instead of having a medical business with no asset, we have what might be termed a medical plant worth a considerable sum.

In conclusion, I would say, from my experience, that medical organization based upon the principles here stated can be put into effect with sure returns, and that it is possible for such an organization to be conducted successfully in all parts of the country, in small cities and the suburbs of large cities. It gives one the assurance of an income regardless of whether he is at the grindstone or on his vacation; it places him in the right position as a professional man, instead of as a day-laborer; it gives him prestige in his community as a practitioner of medicine, as a business man and as the owner of a commercial asset; and in the event of his removal or retirement he will have something to dispose of which a possible or probable purchaser would be willing to pay a good sum for, because the earning-capacity of the business would insure him an income and give him an opportunity to pay for the same out of the business which he would secure.

Sterilization and Disinfection

Practical Directions for the General Practitioner

By ARTHUR M. SLEE, Swiftwater, Pennsylvania
Assistant Director of the Slee Laboratories

WITH our increasing knowledge of microorganisms and the part which they play in our various diseases, we are coming to realize more and more the importance of cleanliness and of sterilization and disinfection. Also the agency of insects in spreading infection is being more widely understood. We now know that malaria is transmitted only by the mosquito, that the dreaded jail-fever, or typhus, gains access to the body only through the bite of the body-louse, that the common house-fly is a busy distributor of typhoid bacilli and of many other pathogenic bacteria. In short, the list of these carriers of infection is growing steadily longer, and the importance of ridding, not only all houses, of them, but all communities as well, may readily be understood.

Let me here emphasize the fact that fresh air, sun-light, and soap-suds are to be numbered among the greatest enemies of disease. Not that I would go so far as to say that a thorough airing and scouring is all that is necessary to make a room that has been used, say, by a smallpox patient fit for habitation by another person; but a clean, well-ventilated room to which the sun-light has free access is a very poor place for the development of pathogenic bacteria.

The methods which have been devised in the last quarter of a century for the purpose of destroying these minute organisms are rather numerous, and some of them are extremely complicated. I purpose to outline here only those likely to be of the most practical value to the practicing physician.

Sterilization By Heat

There are four ways in which heat may be used for the purpose of sterilization, and these

are: (1) boiling in an ordinary covered pot; (2) live or flowing steam; (3) steam under pressure; (4) dry hot air. Each in its way is efficacious and practical.

Boiling for from one-half to three-quarters of an hour will kill all nonsporebearing bacteria. Instruments, clothing, and any small articles not injured thereby, as well as drinking-water may be sterilized by this method.

Live or flowing steam is useful in the sterilization of liquids that might be injured by boiling or high pressure, and of dressings, instruments, clothing, and so on, when access can not be had to an autoclave for the use of steam under pressure. It must always be used by the fractional method. That is to say, the articles to be sterilized are submitted to one-half hours' steaming on each of three consecutive days. The reason for this is, that some bacteria, when favorable conditions do not exist for their growth, go into what is known as the spore stage, becoming dormant. While in this state they are very resistant to drying, heat, and chemical disinfectants. Steam not under pressure has not sufficient penetration to kill these spores at a single exposure.

The principle upon which this fractional method is based is, that the interval elapsing between the first and second and the second and third exposures gives the spores still alive an opportunity to develop into vegetative, or growing, forms; when they are easily killed.

In the absence of a regular steam-sterilizer, a wash-boiler may be used as follows: Pour about two inches of water into the boiler, then put in a pan (a piece of board will answer), with two blocks of wood under it so as to raise it above the surface of the water; place the articles to be sterilized in the pan, cover the boiler and turn on the heat.

Steam under pressure is used in the sterilization of dressings, instruments, glassware, clothing, bedding, and so on. Clothing and bedding should never be placed in any kind of a steam-sterilizer in tightly wrapped packages, but should be spread out as much as possible. Pieces of ice placed in the middle of a dense roll of cloth have been found unmelted after thirty minutes' exposure to fifteen pounds steam pressure. So, it may be seen that a thorough sterilization is not effected under such conditions.

An autoclave possesses the advantage of being suited to use either with or without pressure. When it is desired to use simply flowing steam, leave the exhaust-cock in the chamber open and regulate the heat so that a small jet of steam escapes continuously through the opening.

A very useful and inexpensive little autoclave is being made by the Northwestern Iron Works at Eau Clare, Wisconsin; a contrivance that originally was designed for canning fruit in the home, being simply a small pressure-boiler fitted with a safety-valve and pressure-gauge. The pressure in it may safely be run up to twenty-five pounds. The writer has used one in his laboratory work for over a year with perfect satisfaction.

Rules for Operating an Autoclave

The following is a good rule to adhere to when operating an autoclave.

Place the articles in the chamber, fasten the cover securely, then light the burners. Leave the exhaust-cock in the chamber open till steam begins to escape from it—this allows all cold air to escape from the chamber. When the pressure-gauge registers the desired degree, the pressure should be kept stationary at that point for half an hour; from fifteen to twenty pounds steam pressure completing sterilization in that period. The time being up, open the exhaust-cock; or else the pressure may be allowed to go down without opening this valve at all.

When the gauge registers 0, remove the cover. If the cover is allowed to remain on after the pressure has subsided, the gasket often will stick and considerable difficulty may be experienced in removing it at all. Also, when the autoclave is opened at once, the contained articles will dry off rapidly. This is a good point to keep in mind when sterilizing dressings and clothing.

The most satisfactory heat to use with all sterilizers is gas, for it can be regulated most easily and at the same time is more economical than other methods. Very good burners are now being made for heating with gasolin, these being useful in communities where there is no regular gas supply.

Dry hot air is used for glassware and some few instruments; although, if the temperature is carefully watched and not allowed to exceed 150° C., it also may be employed for sterilizing dressings, and so on. (A temperature above 150° C. will scorch cloth and paper.) The temperature indicated, if maintained for one hour, will kill all bacteria, both in the vegetative and the spore forms. Occasionally bacteria are encountered that apparently are not affected by this temperature; but this only rarely, and they are, as a rule, nonpathogenic.

There are several very good makes of dry-

air sterilizers on the market at present, but the writer has found that the tin bake-ovens, made for use with oil- or gas-stoves give very good results, and they present the attraction of costing considerably less than the regular sterilizing-ovens.

When sterilizing glassware, the oven should always be heated up slowly and then allowed to cool down before the door is opened, otherwise the glass may crack by the sudden chilling. It should also be borne in mind that instruments with rubber handles—or, in fact, any substance melted or ignited by a high temperature—must never be placed in the hot-air oven. Rubber tubing and gloves may safely be disinfected only by boiling or autoclaving; but even so they will not withstand many exposures.

In an emergency, when access may be had to a kitchen range, small articles and dressings can be sterilized in a covered roasting-pan such as most good housewives have among their kitchen paraphernalia. Simply place the pan in the bake-oven, and beside it a piece of paper as an indicator. Do not remove until the paper appears scorched.

Pasteurization of Milk

It has been found that, because of the chemical changes produced in milk when it is boiled, it is undesirable as food for infants. Yet, it often is well, as a precautionary measure, to rid the milk of a large percentage even if not all of its bacteria. A temperature of 80° C. (176° F.), however, does not produce these detrimental chemical changes, and, yet, will kill a very large percentage of the bacteria within ten minutes. An exposure to 70° C. (158° F.) for a period of fifteen minutes has the same action.

Pasteurization may be carried out in the following manner. Procure a wire basket that will hold the desired number of nursing-bottles. Also get a covered tin pail into which this basket and bottles will fit, with about two inches to spare as to height. Punch several holes in the cover. Pour about two inches of water into the pail and bring to a boil, then put in the basket containing the nursing-bottles filled with milk, but not corked. Boil for ten minutes, then cork the bottles and boil for fifteen minutes more. Do not allow the bottles to come in contact with the water, or they will be cracked.

Another method, not quite as safe but which will answer, is, to pour the milk into the inner compartment of a rice-cooker and bring to a temperature of 70° C. for fifteen minutes, or to 80° C. for ten minutes. Pour at once into sterilized bottles and place in the ice-chest. All bottles, after they have been used, should first be scrubbed with a stiff brush in *cold water*, then boiled for one-half hour.

As stated above, milk treated in this manner will be found to be practically sterile and will have experienced little or no change in its chemical composition. The sooner it is pasteurized after milking, the better; and it may safely be used twenty-four hours after pasteurization, but no later.

Drinking-water may be sterilized by boiling or by filtering through a Berkefeld or Pasteur clay filter.

Chemical Disinfectants

Probably the most widely used among chemical disinfectants is a 5-percent solution of carbolic acid in water. An exposure to this solution of one-half to two hours is sufficient to kill most nonsporebearing bacteria. It is by far the most satisfactory disinfectant to use, as it retains its potency for an indefinite period, is quite uniform in its action, does not corrode metals, and is but slightly irritating to the skin.

Bichloride of mercury in a solution of 1 : 1000 follows phenol in popularity. This solution may be made up with sufficient accuracy by adding 60 grains of corrosive sublimate and 2 tablespoonfuls of sodium chloride to one gallon of hot water. This solution is less irritating to the skin than carbolic acid but does not retain its potency for any great length of time. On account of its corrosive action it must not be kept in metal containers.

Trikresol is a very powerful disinfectant, being about three times as strong a bactericide as carbolic acid. In a 4- or 5-percent solution, however, it is very irritating to the skin. Since it does not combine readily with water, it must be shaken thoroughly before being used.

Formalin in a 1 : 10 solution is about equal in strength to the carbolic-acid solution mentioned.

Milk of lime may be prepared by adding 1 part of freshly water-slaked lime to 4 or 5 parts of water. (Air-slaked lime is worthless as a disinfectant, having become carbonated.) This makes an efficient solution with which to scrub walls, floors, furniture, and so on; it may also be used to flush out drains.

Soft-soap suds to which some washing-soda has been added, applied hot with a stiff brush, makes a splendid cleaning solution. The soda alone may be used, if desired. Add 2 1-2 ounces of soda to one gallon of hot

water; or it may be made still stronger, if care is taken that it does not come in contact with the hands. These solutions have a moderate bactericidal power.

Most of the above-mentioned disinfectants are extremely poisonous if taken internally, especially the first three. The antidote for poisoning and burns both with carbolic acid and with trikresol is alcohol. There is no antidote for bichloride of mercury poisoning.

Method of Procedure With Contagious Cases

The room in which a person suffering from a contagious disease is confined should contain only those articles of furniture essential to the comfort and welfare of the patient. Rugs, hangings, clothing, and all superfluous furniture should be removed at once, if practicable. Even if the patient has occupied the room for only a few hours it is wise that these articles be disinfected immediately upon their removal. The sick-room should be well aired and sun-light freely admitted. If a window can be left open constantly, so much the better.

Hands of attendants, must be disinfected before they leave the sick-room. For this purpose, they may be washed in a solution of carbolic acid or of mercury bichloride, then with warm water and soap, and again rinsed in one of the parasiticide solutions. If the 5-percent strength of carbolic acid proves irritating to the skin, it may be reduced by one-half.

Bedding and soiled linen is soaked for one-half hour in carbolized water before it is taken from the room, after which it is boiled. Mattresses, because of their denseness, are very difficult to disinfect; so it is wise, as a rule, to destroy them by fire; especially if they have become soiled with the discharges of the patient.

Dishes, knives, forks, and the like should be set aside for the exclusive use of the patient. After each meal these are washed in carbolized water, boiled in soda or soap-suds, and then rinsed in clean water. Portions of meals not eaten should be burned.

Discharges from the patient must be treated with great care. This applies particularly to cases of typhoid fever, cholera, tuberculosis, and diphtheria. A special vessel should be kept to receive these discharges, and when practical they should be destroyed at once by fire. Otherwise place in the vessel about twice as much carbolic acid or milk of lime as the dejecta and stir, to break up all masses. After this has stood for not less than one-half hour, pour it down the water-closet, or bury it, if in the country.

Water-closets and sinks used by the patient or receiving discharges from him must be flushed with large quantities of water, and one of the disinfecting solutions should be poured in daily. The floors and walls around them may be scrubbed with hot soda solution or soap-suds.

Disinfecting of rooms is accomplished by means of one of two gases, that is, either sulphur dioxide or formaldehyde. The latter has been found to be the more satisfactory.

Sulphur dioxide can be generated in a room by placing 4 or 5 pounds of commercial sulphur, broken into small pieces, in a flat pan and pouring over it about 4 ounces of alcohol. This pan should be placed in another, larger, one containing water. All cracks in the room having been sealed, ignite the alcohol with a match, and, after leaving the room, seal cracks around the exit door. Leave the room thus exposed to the fumes for eight to twelve hours. This will kill all life, insect as well as bacterial. However, the fumes injure some materials, so the use of sulphur in many instances is undesirable.

Formalin has largely superseded sulphur for fumigating, being more penetrating, while not injurious to hangings and pictures. A number of methods have been devised for liberating the latter gas, but I will outline here only a few of the most easily applied and practical ones.

As for sulphur, all cracks in the room must be sealed up, and the temperature should be at least 16° C. (61° F.), with 60 percent or more humidity. Formaldehyde (as also sulphur) gives the best results when used in a warm damp atmosphere. Sprinkling the walls and floor with water assists greatly in the germicidal action.

A small alcohol-lamp has been invented for heating the solid polymer of formalin-trixoymethylene. This is put up in small pastiles, 100 of which are used for every 1000 cubic feet. This apparatus is small and compact, besides being surprisingly inexpensive. It is known as the Schering system, and the New York Department of Health reports very good results obtained with its use.

Wilson has used a simple method. He places the formalin, 12 ounces for every 1000 cubic feet, in a tin pan and heats this with an alcohol-lamp or with alcohol-soaked asbestos contained in a tin can.

Pouring formalin over crystalline potassium permanganate has been found quite satisfactory; the proportions being 16 ounces of

formalin and 6 3-4 ounces of the permanganate for every 1000 cubic feet. The vessel containing this should be enclosed in some non-conductive substance, to retain the heat; but the top is left uncovered, of course.

A very simple method is, to hang sheets in the room and throw upon them 12 ounces of formalin for every 1000 cubic feet, extending the exposure for ten hours. This will not penetrate dense fabrics, but will disinfect the surfaces of walls, floors, furniture, and all other exposed surfaces.

Method of Infection and Disease Transmission

Diphtheria bacilli enter the body through the mouth or nose. They may be suspended in the air or adhere to toys, cups, and so on, previously used by an infected person. They are transmitted from person to person by kissing and close contact or by one person coughing toward the face of another.

In diseases where the site of infection is in the mouth or some part of the respiratory system, there is great danger of droplet infection. When a person coughs, minute drops of saliva are expelled from his mouth; and this more often than otherwise contains the germs of disease. These droplets may float about in the air currents for hours, and the danger from them may readily be seen. Discharges from mouth and nose should be disinfected as described above.

Prophylaxis: Give to all persons in the household 1000 units of diphtheria antitoxin.

Typhoid and cholera organisms gain access to the stomach and intestines by way of the mouth. They may be transmitted from person to person the same as those of diphtheria, though not so readily. The urine, feces, and vomitus of these patients are infectious.

Prophylaxis: In typhoid infection, give typhoid vaccine. During the prevalence of epidemics, either disease may be spread by food, water, and milk. No uncooked food should be eaten. (This applies to vegetables as well as to all other food.) Milk should be pasteurized and all water boiled or filtered.

Tuberculosis. Bacilli enter the body through mouth and nose. Infection may occur through wounds. The disease is transmitted the same as diphtheria, and there is great danger from droplet infection. The sputum is highly infectious, and the urine and feces should be treated with suspicion.

Typhus is transmitted only by the bite of the body-louse, transmission from person to person being unknown. Prophylaxis can be accomplished only by a thorough cleaning up of the premises and of the persons found there. Get rid of the lice, and there is no danger of further infection.

Tetanus in the true sense of the word is not contagious. The bacilli are dangerous only when introduced into a wound. It is only necessary to disinfect such articles as may have come in contact with discharges from the wound, and the room need not be fumigated. It must be borne in mind that in the case of tetanus you are dealing with a spore-bearing bacterium that possesses a great resistance to chemicals and heat.

Prophylaxis in all cases of gunshot and puncture wounds, crushing fractures, contusions, and wounds soiled by earth or street dirt, give 1500 units tetanus antitoxin *at once.*

Smallpox is one of the most contagious diseases known, the virus being the material through which it is transmitted. It is dangerous for an unvaccinated person to enter a house even in which there is a smallpox patient. The virus is thrown off from the body and is carried about by the air currents for a considerable period of time. Infection has been known to take place many yards away from a smallpox hospital. During convalescence, the scabs from the pustules are infectious.

Prophylaxis: Thorough inoculation with smallpox vaccine of all unvaccinated persons.

Scarlet-fever and measles are transmitted in a manner similar to that of smallpox, the virus being carried about in the air currents. Discharges from mouth and nose as well as all peelings of the skin are infectious.

Prophylaxis may be obtained only by the rigid isolation of all cases, and a thorough disinfection of all rooms occupied by them and of all clothing, and so on.

It is well to observe the following rules in all cases of contagious disease.

Physicians and attendants, while in the sick-room, should wear long gowns and caps that may be discarded before they leave, and these should be disinfected before they are conveyed from the room. When this is not done, there is great danger, on the part of the attendant, of playing the part of an intermediate conveyor, and carrying the infection to some other person.

Caution the patient to be careful while coughing and expectorating. Paper napkins or pieces of cheese-cloth should be placed within easy reach to receive such discharges, and these should be destroyed by fire after being used.

Avoid stirring up any dust in the sick-room, as in all probability it harbors the organisms of the disease from which the patient is suffering. When cleaning is necessary, it should be done by washing or scrubbing.

The Conflict of Conscience

II. The Cause

By CHARLES GILBERT DAVIS, M. D., Chicago, Illinois

EDITORIAL NOTE.—In this address, which was delivered at the last meeting of the Tri-State Medical Society, held in Hannibal, Missouri, Doctor Davis discusses certain vital emotional factors in disease. The investigations of Freud and Jung have intensified their interest, and this paper points out the line of duty for the physician. It will be continued in the next issue of "Clinical Medicine."

> Whatsoever creed be taught or land be trod,
> Man's conscience is the oracle of God.
> —*Byron.*

IT IS self-evident that man, by intuition and also by education, has a monitor called conscience. It may be termed the governor of his moral mechanism.

When this conscience is in harmony with the rest of the vital machinery all goes well. But vitiate it or remove it, and revolution, destruction, and anarchy reign supreme.

From the throne of conscience emanate the decisions or edicts that make or mar human destiny. When there is no discord, when the sky is clear and obedience is unquestioned, life is a beautiful stream, for there is no fear. The functions of the body work normally, and happiness and health reign supreme. But when there is disobedience, then comes destructive fear. Shakespeare has well said, "Our conscience does make cowards of us all."

The coward is afraid, and fear destroys life. Acting through the sympathetic nervous system, this depressing emotion, as we have seen from scientific experiments, disturbs the functions of the internally secreting glands and lays the foundation for all manner of destructive action.

It may really be said that man rises or falls according to the specific gravity of his thought.

When buoyant, care-free, fearless, health-giving emotions sweep through the soul, the glands are stimulated through the sympathetic nervous system and pour their secretions in normal quantities into the blood currents, lifting the body, mind, and spirit to the acme of human power. This is normal, healthful life.

Practically all the fear that burdens humanity arises directly or indirectly from a violation of conscience. It may be real or imaginary, acquired or hereditary. Thousands of cases of diseased bodies and minds in childhood undoubtedly have their origin in a fear-stricken ancestry.

No stratum of mankind is free from the pangs of conscience. Of course, the standard of right and wrong changes according to education and training, but it is always there to approve or inflict pain and punishment.

Among some of the western Indian tribes, I am told that when in battle the warrior who unhorses his enemy and, yet, retreats without giving the *coup de grace*, by taking the scalp, is forever disgraced. He is conscience-stricken, refuses to eat, wanders alone, and often sickens and dies. All this, because he thinks he has offended his Manitou. Yet, this same warrior, without remorse, would lash his prisoner to the stake, light the fire, and see him writhe in agony and death, without experiencing a pang of conscience.

But, as man has advanced in culture and education, his sensibility has increased, till his standard of right and wrong is like the most delicate scale, vibrating to the slightest breath. It is this increased sensibility—we might say, often this morbid sensibility—that is forever warning man when he offends the moral law; and it is the struggle he makes to free himself that today is sapping the vitality of mankind.

This is the warfare of modern life and, as the years pass, it grows more acute. A house divided against itself can not stand. The proof of this is the vast army of human wrecks that we meet every hour of the day. Everywhere the conflict of conscience rages.

To an observer, it is evident that there is something lacking in the mechanism of the lives we lead. We are forced to confess that much of our civilization does not civilize.

Society has held us in with a set of rules said to be for our betterment and for the improvement of the race; but against these laws, rules, and regulations our desires often rebel. From infancy to old age, we are continually engaged in repression of these race-instincts, and in this repression there often occur those accidents that react to the point of destruction. There is a happy medium that we must be brought to observe.

Every tramp on the highway is a fair illustration of an arrested dementia præcox, of one who has submerged his morbid complex as he wanders and forgets.

The business man who punctually waits upon the functions of the church, but lets the greed of mammon govern him in his commercial transactions in leading this double life, feels the grinding of these wheels of conscience, and he is afraid. And often this fear stimulates the suprarenal glands—he has arteriosclerosis—and the doctor says he died of Bright's disease. But not so: it was his conscience.

We struggle to bury our fears from the eyes of the multitude; but these buried emotions are, often, years afterward the creators of many of the neuroses and psychoneuroses.

There are thousands of such cases of hysteria, psychasthenia, neurasthenia, and other disturbances of nutrition manifested in various forms of chronic disease. Your sins, if not blotted out, will find you out. These buried fears are, many times, the offspring of otherwise inexplicable mannerisms and eccentricities of life. Many a jocund exterior of rollicking wit and humor that has convulsed the world has been born of springs that take their source from the deep hidden wells of sorrow.

When the conflict rages, the nobler part would be to rouse the higher ideals of life, banish the desire and stand victor on the field of conflict. This would yield, ultimately, health, happiness, and life.

But, alas! how often the man hesitates, and search is made for some compromise; and, so, the house stands divided against itself. He keeps his errors as well as his good resolutions, but endeavors to conceal the one from the other. But, in the ultimate he suffers, wrecks his manhood, and leads a Jekyl-and-Hyde existence.

This method is never successful. The conflict may continue for years, and often in the agony of the struggle the man seeks relief by bridging over the chasm between his conscience and his conduct through a resort to the use of tobacco, alcohol, or other drug. In these stupefying substances he finds momentary calm from the awful internal conflict; ultimately, though, at the expense of mental and physical integrity.

Every dipsomaniac has a vice or a crime to conceal, and the fear of his being discovered drives him to the anesthesia of alcohol. There is no doubt in my mind but that the present world-wide consumption of alcohol and tobacco arises from the application of these poisons in quieting the nervous strain arising from this conflict of conscience portrayed. The removal of fear from the world will automatically solve the problem of intemperance.

In order to escape from the stress of conflict, the morbid complex or mental attitude may be so completely divorced from the personal of the patient that it may pass beyond the control of normal consciousness, and may then be said to have become dissociated.

From this condition may arise many of the obsessions, phobias, and instances of somnambulism and multiple personalities. In fact, here we may find the combination, the mechanism that develops the various forms of insanity and also numerous manifestations of chronic disease or crime that always have been beyond the pale of lucid explanation.

Lady Macbeth in her somnambulistic walk after the murder, struggling to free herself from her sin, exclaims: "Out damned spot; out, I say!"

Many prejudices, apparently without reasonable existence, upon deep sounding of the inner consciousness are found to spring from a *vera causa* that has been hidden away in one of the locked and bolted chambers of the memory, in an endeavor to conceal it from the scrutiny of conscience.

In the tumultuous warfare of the human soul, we find involved the great primary instincts, self-preservation, nutrition, and sex. Any of these may be pitted one against the other, or, what is more frequently the case, we find the primal instinct at war with that environmental code of behavior that has been developed through the gregarious life of the race.

Trotter[10] has well denominated this phenomenon the "herd-instinct." It is this conflict between the primal instincts and the social instincts that has diminished man's physical, mental, and moral resistance.

Owing to the lessened resistance to bacterial invasions, all forms of suppurative diseases, together with tuberculosis, vice, crime, and insanity, are on the increase. As I have stated previously, the great disturbing element in this deteriorating process is this conflict of conscience, which, giving rise to the emotion of fear, acts upon the glands with internal secretions and thus poisons the life current; this, in turn, producing a morbid metabolism, which ultimately cripples or destroys the life-functions.

It is fear from the cradle to the grave that, lessening our vitality, destroying our happiness, retarding human progress, changes this world from a paradise into a veritable inferno.

(*To be continued*)

What Others are Doing

STRONTIUM IN DEFECTIVE OSSIFICATION

Investigations go to prove, according to F. Lenhardt, Halle (*Zeitsch. f. d. Ges. Exp. Med.*, 1913, p. 175), that strontium may take the place, in a measure, of calcium, when this is deficient for bone formation in growing animals; although it cannot supply the insoluble structure. Strontium, thus, is indicated in osteoporosis, ostepsathyrosis, and in defective formation of callus. The author cites one case of the latter kind where this agent gave excellent results.

READ THE PARIS MEDICAL

We strongly urge every one of our readers who is familiar with French to secure the special therapeutic number of the *Paris Médical* of November 1, 1913. This issue contains a large amount of material which is intensely interesting, and so much of it is so distinctly alkaloidal in character that we almost felt tempted to call it an "alkaloidal issue." As especially noteworthy, we call attention to Professor Carnot's splendid review of the therapeutics of 1913; also to Professor Pic's paper upon the diuretics; Professor Dopter's article upon the treatment of dysentery with the salts of emetine; Professor Mathieu's paper upon the atropine in gastrointestinal therapy; and Metzger's article upon the employment of hypophysial extracts.

In our opinion, the *Paris Médical* is the best medical journal published in France—and one of the best published in any country. The subscription price of this weekly is 15 francs ($3.00) a year; the charge for this special number being 50 centimes (10 cents). The publishers are Ballière et Fils, 19 Rue Hautefeuille, Paris.

DEATH FOLLOWING ADMINISTRATION OF CAMPHOR

While the parenteral administration of camphor is gaining favor, W. Ruebsamen (*Zent.-Bl. f. Gyn.;* through *Muench. Med. Woch.*, 1912, p. 1872) cautions against its indiscriminate use; he having had one case ending fatally. After a laparotomy in a woman, the doctor poured 170 Cc. of sterile 10-percent camphorated oil into the abdominal cavity, as a prophylactic measure against peritonitis. The patient died, in collapse, on the third day. (Abduction demonstrated complete asepsis.)

The explanation advanced is, that ventrally the camphor is resorbed more rapidly than when injected subcutaneously or intravenously. The author advises employment of a 1-percent oil solution, in place of the stronger camphorated oil.

POISONING FROM BORIC ACID

Pointing out that boric acid is not an altogether harmless medicament, and that four deaths are charged to it in literature, J. H. Sanders tells (*Brit. Med. Jour.*, March 16, 1912) of a mishap in his own practice. In a case of obstinate dysentery, he had treated the man for several weeks with boric-acid irrigations, when grave symptoms of poisoning became apparent.. There appeared a hemorrhagic exanthem (in spots), more largely over the face and the inner aspects of the limbs, together with threatening cardiac weakness and spells of delirium. After the omission of the boric treatment, the symptoms disappeared, although only very slowly; the patient eventually recovering entirely. The moral is plain.

VERONAL POISONING

Veronal poisoning is not infrequent in England. Thus, the official reports show that between the years 1906 and 1910 inclusive there were 34 deaths from this cause in England and Wales. Since 1910, a number of deaths have been reported, although the statistics are not collated by W. H. Willcox, who discusses the topic in *The Lancet* for October 25, 1913 (p. 1178).

Doctor Willcox declares that cases of death have been recorded after doses of veronal as small as 10 grains, and that in a healthy adult it may be assumed that a dose of 50 grains

is dangerous; in fact, this may be regarded as an average minimum fatal dose.

Toxic symptoms following the administration of veronal are drowsiness, headache, and a reeling gait. The patient falls into deep sleep, from which he can be aroused only with difficulty; while in other cases this drowsiness deepens into coma, the patient becomes cyanosed, and respiration is rapid and stertorous. At this stage, a marked rise of temperature is common, and a physical examination of the lungs will probably show areas of dulness, vocal resonance, bronchial breathing and moist sounds; in other words, all the clinical signs of pneumonia will be present. These signs will be accompanied or followed by those of general edema of the lungs, such as moist bubbling râles all over. It is easy for a severe case of veronal poisoning to be taken for one of pneumonia.

The treatment is as follows: Empty the stomach with the tube if the patient is seen within four hours after taking the drug. Wash out thoroughly with two pints of warm water, and before withdrawing the tube introduce a pint of hot strong coffee, with some milk in it, and an ounce of castor oil. Cardiac stimulants should be given, such as strychnine hydrochloride, 1-30 grain, with digitalin, 1-100 grain. Warm normal saline should be given subcutaneously, also rectal injections of normal saline containing 4 percent of glucose—15 ounces of this mixture every four hours.

If there is much cyanosis, give inhalations of oxygen; if the pulse is feeble, the oxygen may be passed through a wash-bottle containing absolute alcohol, the latter acting as a valuable cardiac stimulant. Watch the bladder, and draw the urine with the catheter, if necessary.

INFLUENCE OF IRON UPON THE BLOOD

Systematic testing of the blood of anemic and chlorotic patients by the hematocrit method have shown that, under an iron therapy (Blaud's pills, chalybeate springs), the first effect is an absolute increase of the erythrocytes. However, augmentation of the hematin is not parallel; rather does this result occur only after the number of erythrocytes has been very greatly multiplied. R. Schmincke, who makes this report in the *Muenchener Medizinische Wochenschrift* (1913, p. 1199), draws from this fact the conclusion that it supports the theory that iron preparations cause an excitation of the hematogenic organs, and that then, later, these newly formed blood-cells experience an increase of their hematin.

STRYCHNINE IN INTENSIVE DOSAGE

According to the experience of a number of recent investigators, quoted by Carnot in his therapeutic review (*Paris Médical*, Nov. 1, p. 486), strychnine as ordinarily employed is given in insufficient dosage. According to Hartenberg and others, we are unnecessarily afraid of its toxic action, but we must know how to use it correctly.

Only in full dosage is strychnine capable of producing marked therapeutic results. Thus, for instance, Troisfontaines gives it in doses of 2 to 4 centigrams (1-3 to 2-3 grains) daily, without ever having observed a single serious accident. Hartenberg declares that the usual 1- to 2-milligram (1-64 to 1-32 grain) doses [thrice daily?—ED.] are entirely insufficient. He depends upon a certain physiologic reaction to determine the maximum efficient dose. This reaction is as follows: a sense of slight drunkenness; sometimes a little vertigo; possibly stiffness of the jaws and sometimes of the limbs.

Hartenberg further asserts that strychnine should be given in progressively increasing doses, on account of the rapid increase of toleration. He prefers the sulphate, and gives it hypodermically. The therapeutic reaction just described follows within a quarter of an hour after the injection and lasts for one-half to one hour. This is no inconvenience and does not prevent the patient from going about his business; on the contrary, it produces a decided sense of euphoria. To elicit this reaction, from 5 to 6 milligrams (5-6 to 1 grain) is required in women, and from 6 to 7 milligrams (1 to 1 1-6 grain) in men.

The indications for this method of intensive medication with strychnine are as follows:

1. In neurasthenia, its action appears to be almost specific: "Strychnine is to asthenia what morphine is to pain." In this condition, its results often are obtained with truly astonishing rapidity.

2. Strychnine appears to favor muscular tone and nerve regeneration in affections of the medulla and in neuritis. Mendelssohn and Hartenberg assert that they often have observed reduction of ataxia and improvement of the general condition. The same is true in certain amyotrophic paralyses.

3. In impaired nutrition and general cachexia, strychnine in large doses increases the tone of the different viscera.

To these three indications, Carnot says, we should add the various deliriums with agitation, especially delirium tremens. In the latter condition, the use of strychnine sulphate in large and increasing dosage is declared to be superior to all other methods of treatment.

HYPOTENSION HEADACHE: NATURE AND TREATMENT

To the *Presse Medicale*, Doctor Martinet contributes an interesting article upon the headache of hypotension. (See *Revue Therapeutique des Alcaloides*, Oct., 1913, p. 3101.) These patients, he says, are nearly always women, and suffer greatly from headache exhibiting the following characteristics: The pain inevitably begins with the occiput and is always most severe in that locality, and only secondarily is it referred to the parietal region.

The patients declare that this pain constitutes a sort of continuous tension, a sensation of weight or of severe constriction. From the moment in which it appears it is constant, but it is most severe when the patient is in the horizontal position. It diminishes and may even disappear when the vertical position is maintained. Upon lying down it increases in severity; it is most marked in the morning when the subject awakens.

In certain women this pain is intolerable, and even may produce a most exhausting insomnia. Occasionally the patients are relieved when they lie on the stomach. There are some who only can sleep when in this position.

The two most important characteristics of this form of headache are its location in the occiput and its exaggeration in the horizontal position. However, the following points are of considerable importance: The headache is not increased during digestion, and even may be less severe after eating; neither is it influenced by season, the patients suffering from it as much in the winter as in the summer. It is obstinate, rebellious, and may last for months, even for years.

There are certain patients who are never entirely free from it, who always experience a more or less severe sensation of weight upon the occiput. This type of headache is not accompanied by fever, digestive trouble, or vomiting. As a rule it is not influenced by the ordinary treatment with coal-tar analgesics, including aspirin, or by purgatives, or other customary medication.

In all these patients, there is a very pronounced reduction of vascular tension, accompanied by diminution of the cardiac impulse. These patients have small arteries, small aortas, and small hearts, and their arterial tension is low. Very frequently there is venous stasis, and there may be, during the vertical position, some edema of the lower limbs.

The conclusion is, that, as regards etiology, these patients suffer from a meningoencephalic venous stasis, located principally in the cerebral sinuses and their affluents.

The therapeutic indications clearly are, to withdraw the blood toward the lower extremities and to increase as much as possible the tone of the cerebral circulation. From time to time the patient should be placed upon vascular tonic medication, as, for instance, strychnine, digitalis, sparteine or other remedies of this class. The patient should receive strychnine, 3 or 4 milligrams (1-20 to 1-15 grain) daily, for three or four weeks, together with digitalin, in 1-to-2-milligram doses, as required, for weekly periods. Galvanization also is suggested.

To improve the circulatory tone, Martinet advises hot baths, followed by alcohol rubs, massage, Swedish gymnastics, mechanotherapy of the lower limbs, and carefully supervised walking.

REMOVAL OF HARDENED WAX FROM THE EAR

An inquirer having requested, through *The British Medical Journal*, for a better solvent for hard ear-wax than warm oil, the editor of *The Pharmaceutical Journal* (Oct. 25, 1913, p. 608) has collected and published the various methods suggested, as follows:

1. Equal parts of solution of hydrogen dioxide and glycerin, instilled morning and evening for three days; then gentle syringing.

2. Instillation of hydrogen dioxide (10-vol.), left in the ear for about ten minutes before syringing.

3. Glycerin, 1 fluid dram, with saturated (or nearly saturated) solution of sodium bicarbonate, 7 fluid drams, dropped into the ear six to ten times a day for two days. It is also a good plan to place a piece of absorbent cotton wool with the above solution in the meatus, to retain the liquid. A very ancient wax plug may require a second course of treatment after the removal of the outer part by the first syringing, for which a hot solution of sodium bicarbonate is used.

4. A mixture of ether, 1, and olive oil, 3, is claimed to be invariably efficient in soften-

ing wax, however hard, in the ear; sufficiently so to allow of its being easily syringed out by soapy water if the latter is used as hot as the ear can bear. The temperature is important. The etherized oil should be dropped in the night before, and also on the morning when the syringing is to be done.

5. A saturated solution of sodium bicarbonate mixed with an equal part of glycerin.

6. Hot water, since ear-wax melts or becomes soft at 100° F. Syringing with water at 105° F., which the external ear can bear comfortably, will materially hasten the removal of all natural plugs. It is necessary to use a thermometer.

7. Two or three drops of ether, instilled in the canal for two minutes, will usually have the desired effect. It must first be ascertained, however, that the plug fills the meatus, as, should the ether reach the membrana tympani, it causes great pain.

ANTITYPHOID VACCINATION IN THE ENGLISH ARMY

Sir John P. Hewett, in an interesting address upon the work of the medical profession in India, quoted in *The Lancet* for October 4, 1913 (p. 983), gave the following striking instance of the value of antityphoid vaccination in the British Indian army:

In 1912, out of 693 men serving in four batteries of artillery stationed in India, in the provinces of Agra and Oudh, and of which he was lieutenant-governor, 687 were protected by inoculation. In that year there occurred 2 cases of typhoid fever among the 6 unprotected men, but only one case among the 687 who had been vaccinated.

An officer in one of these batteries wrote Sir John recently that all of his men had been inoculated since some years ago, and added: "I have never lost a man since, nor have I had a case of enteric fever, that I can remember, until this year. When I remember the number we used to lose in a battery each year, I am astounded at Sir Almroth Wright's genius."

A NEW USE FOR CALCIUM SULPHIDE

After recording the many diseases and disease-conditions in which calcium sulphide has been used successfully, Pigeaud, in *La Dosimetrie* (Oct. 19, 1913, p. 150), suggests its employment in the treatment of epilepsy, either alone or in combination with the bromides, among which he considers the monobromated camphor one of the best.

Besides the action of the sulphurous-acid factor of this remedy in combating infectious microorganisms, promoting a healthy condition of the mucous membranes and reducing excessive blood pressure, the author quotes Netter as pointing out that in conditions of nervous excitation the free calcium ions are necessary for the proper functioning of the cellular elements. In such conditions, it is wise to reduce the proportion of sodium and to increase the percentage of calcium in the body.

Epilepsy being a condition in which the phenomenon of excitation predominates, the author believes that the indications are clear for the administration of calcium. Calcium sulphide is especially indicated, because every case of epilepsy presents also a condition of intoxication, and this remedy serves to increase the elimination of the toxins and to lessen their production.

To put the matter in a few words, Pigeaud believes that calcium sulphide has a threefold application in epilepsy: first, elimination of the toxins; second, reduction of vascular pressure; and, third, sedation of the nervous system. It should be used in connection with monobromated camphor and the dosimetric trinity.

CALCIUM SULPHIDE IN THE TREATMENT OF SUPPURATING BURNED SURFACES

J. Culbertson (*Thera. Record*, Oct., 1913, p. 300) reports an interesting experience with a patient who, following a severe burn, treated in the classical manner with carron oil, developed (in spite of extreme care in the hospital treatment) great pus formation over the burned area, which included the entire left arm, from the shoulder to the metacarpo-phalangeal articulation. A proprietary ointment was applied, which only seemed to increase the trouble. Then an attempt was made to apply some grafts to the skin, but, in spite of all precautions, the pus infection continued and all the grafts sloughed off except one.

Finally, in despair, Doctor Culbertson placed the patient upon calcium sulphide, giving a grain every three hours. At the end of a week, purulency had subsided to a considerable extent and the offensive odor had largely disappeared. Thereupon grafts were applied again, the same technic being employed. Twelve grafts were taken from three different arms, and all of these "took." Calcium sulphide was continued for some

days later, and another area was grafted with skin, with equally good success. At the time of writing the burned area was closing in rapidly with new skin.

INGROWING TOE-NAIL

According to Liesching, in *The British Medical Journal* for September 20, 1913 (p. 740), good results in the treatment of ingrowing toe-nail may be obtained by dusting the affected part with a little powdered lead nitrate, after careful cleansing. A white scab forms, which must be removed on the following day, otherwise pus is liable to collect underneath; the dusting being then repeated. The same treatment is followed from day to day as long as necessary. Liesching has been using this method for many years, with satisfactory results.

SHALL WE OPERATE UPON DIABETICS

Some years ago we had a rather spirited discussion with one of our contributors, who contended that surgical operations upon diabetics almost always resulted fatally. Last month we published the picture of a physician, a reader of this journal and a diabetic, who had had first one thigh amputated, and then the other, after he had passed his eightieth year.

Now, in the November, 1913, number of *The Interstate Medical Journal* (p. 1069), we find an interesting review of the literature upon this topic by M. G. Seelig. On the one hand, Dr. Seelig quotes Sternberg as saying, "Any necessary operation may be performed with safety on a diabetic;" and then he gives the counterstatement made by Lepine, that "Every operation is contraindicated in a diabetic."

With such diversity of opinion, the average physician finds it difficult to arrive at a safe judgment. However, as Doctor Seelig says, surgical operation by no means is contraindicated upon diabetic patients; indeed, Murphy, Joslin, Miller, and Manges have published case-histories of diabetics operated upon for inflamed gall-bladders, hypertrophied prostate gland, and uterine fibromata, with the result that a pronounced improvement or cure of the diabetes resulted; in other words, surgical operation may be a distinct means of favorably modifying the disease itself.

However, as Doctor Seelig points out, there are certain principles which should govern us in advising the physician regarding surgical intervention.

The first principle is, that the result depends upon the severity of the disease. Diabetics, whatever the degree of severity, are naturally poor operative risks, but the milder the type, the greater the degree of safety.

The second principle is, that wound healing is profoundly influenced by diabetes. However, we now know that phlegmon and gangrene, the complications so greatly to be feared, depend upon infection. If every link in the aseptic chain is preserved absolutely intact, then wounds in diabetics may heal as quickly as they do in the normal individual. The moral is, that, in operating upon these patients, with tissues compromised as a result of faulty metabolism, the utmost care is necessary for the maintenance of asepsis.

The third general principle is, that not only the special tissues operated upon are compromised, but also that the organism as a whole is weakened in a diabetic patient. Such complications as endoarteritis, arteriosclerosis, and myocarditis must necessarily profoundly influence the result.

Doctor Seelig concludes from this investigation that, in the present state of our knowledge, our judgment regarding operative interference must be governed by the degree of symptomatic imperativeness with which the operation is demanded, by the severity of the diabetes, and by the general condition of the patient.

THE ACTION OF ARBUTIN

A writer in the *Revue Therapeutique des Alcaloides* (Oct., 1913, p. 3083) says that, as a result of decomposition of arbutin in the urinary tract into hydrochinone, it possesses decided antiseptic, antiputrid, and antizymotic properties, and at the same time is a valuable diuretic. Since elimination takes place through the urine, it acts most powerfully upon the kidneys and bladder.

Arbutin is declared to have a special and nearly specific tonic action upon the urinary-tract mucosa, and it is indicated in the treatment of pyelitis, pyelonephritis, acute and chronic catarrh of the bladder, blenorrhagia, incontinence, retention of the urine, and leucorrhea. A number of cases of cures of chronic vesical catarrhs, where there was fetid and ammoniacal urine, were reported.

Arbutin is without harmful action upon the digestive tract, whatever dose may be

administered. Jablonovski has given 20 Grams of arbutin in forty-eight hours, without observing the slightest toxic phenomenon.

DYSENTERIC ABSCESS OF THE LIVER

According to Cade, Thévenot, and Roubier, who have studied two interesting cases of amebic dysentery (see *Arch. d. M. d. l'App. Dig.*, Oct., 1912), the pus of amebic abscesses often is sterile. Frequently the amebæ are not found, and anaerobic bacilli may be present. However, the absence of amebæ is not necessarily of peculiar significance, since these organisms frequently are imbedded in the walls or the recesses of the abscess. They are really difficult to find in the pus itself. These authors also observed that dysentery quite often is associated with tuberculosis. Thus, in the two cases observed, the abscess contained also Koch's bacillus. Usually the abscess is large, and may contain from two to three liters of pus. Alcoholism is spoken of as playing a preponderant role in the etiology.

The principal signs indicating the presence of an amebic abscess of the liver are: rapid and decided development of the size of that organ, determination of a localized tumefaction, and severe pain in the right hypochondrium. These signs being present, the bowel should be examined, with the rectoscope, for the presence of the characteristic dysenteric mucosa. The feces also are to be examined for amebæ, while fecal matter may be inoculated in a cat's rectum.

EMETINE TREATMENT OF DYSENTERY IN CEYLON

The government hospitals of Ceylon have been supplied with emetine, this remedy now being generally used in that country for the treatment of dysentery. *The British Medical Journal* (Sept. 20, 1913, p. 769) inquires whether similar steps will be taken in regard to the official use of this drug in Indian hospitals. The position of emetine as a specific for the treatment of amebic dysentery and amebic hepatitis is now generally regarded as established.

EMETINE IN THE TREATMENT OF AMEBIC LESIONS

Since the introduction of the emetine treatment for amebic infection, Professor Dopter has treated 46 cases of amebic dysentery and 5 cases of amebic abscess, the details of which he promises to publish later. In an extremely interesting paper concerning this remedy printed in the *Paris Medical* (Nov. 1, 1913, p. 499), he describes the technic which he now employs when using emetine.

The injections, Dopter says, are made in the usual manner, under the skin of the thigh or the arm, the hydrochloride of emetine being employed. These injections are entirely painless. However, in some cases the next day and the day following, there is slight swelling and a little redness at the point of introduction. These phenomena are temporary; however, there may remain a slight induration lasting several days. When injections are given for several succeeding days, it is advisable to select a different locality each time.

The first dose should not be less than 4 centigrams (2-3 grain) of emetine hydrochloride, and should be repeated on each succeeding day, until a clinical cure is secured. Some clinicians inject only 2 centigrams (1-6 grain), but in such cases the cure is much more slow. Usually after the first injection, or at the latest after the first two injections, there is a distinct and rapid improvement, first apparent to the patient through disappearance of the colic. A number of these patients, who had suffered from the disease for several years and experienced a constant sense of painful abdominal tension, declared that they "didn't feel their stomach any more."

At the same time the stools change in character. Bloody mucus disappears rapidly, the stools become more pasty in form, and their number falls, from ten to twenty-five or more daily, to only one or two in a day. Further, a daily examination of the stools shows gradual disappearance of the amebæ, and often that cystic transformation which usually is observed when a cure is imminent.

This rapid improvement under emetine is constant, and, while it is most marked in recent cases of only a few months' duration, it was also notable in patients who had suffered from the disease for seven, nine, or even twelve years. Dopter warns not to discontinue the medication too soon. He believes it prudent, in order to avoid recurrences, to continue the injections for several days after apparent cure.

In the treatment of amebic abscess of the liver, Dopter begins with 4 centigrams (2-3 grain) of emetine hydrochloride, but, if the process is a severe one, 8 or even 10 centigrams (1-3 to 1 2-3 grains) may be given

daily. This dose is tolerated without the slightest inconvenience.

Naturally, the entire treatment of liver abscess cannot be summed up in the injection of emetine. Where there is a collection of pus, this must be evacuated. In mild cases, with slight elevation of temperature, when the patient is in good general condition, the abscess may be emptied by means of aspiration.

In more severe cases, in which the condition of the patient is grave or the disease is progressing rapidly and is acute in character, more radical, surgical intervention is necessary; but after the operation daily injections of emetine should be given, as already described for dysentery. Under its influence, the condition of the patient rapidly changes for the better, the pus loses its chocolate color and becomes grayish, the discharge grows less, and usually at the end of six to eight days the dressings become dry and the wound closes.

Rogers advises, in addition to the subcutaneous use of emetine, washing out of the abscess pocket with a very dilute solution of emetine. Dopter asserts that he has not found this expedient necessary.

When the abscess empties itself spontaneously by way of the bronchi or intestines, he believes that surgical intervention is useless, and in such cases the emetine treatment alone suffices to bring about a cure. In the cases thus far known, reported by Chauffard and Costa, and in two cases which he has recently observed, such a happy result was the final outcome.

THE ANTIHEMORRHAGIC ACTION OF EMETINE

It is well known that one of the remedies most valuable in the treatment of hemoptysis is ipecac, given in nauseant doses. Animals thus treated show, at autopsy, a lung which is nearly exsanguinated. In view of this fact, Flandin and Joltrain (Soc. Méd. Hop., April 7 and July 18, 1913) recommend the substitution of emetine for ipecac, since it produces no nausea and does not influence arterial tension. Several patients suffering from hemoptysis, when treated with injections of 4 centigrams (2-3 grain) of emetine hydrochloride, were decidedly and rapidly benefited by this medication.

This antihemorrhagic action, it seems, is not prolonged, so that Flandin advises repeating these injections once or twice daily for three or four days. Just how the emetine acts is not well explained. The effect is either due to a fall of the blood pressure or to a modification of the coagulability of the blood.

It seems, though, that this apparent hemostatic property should not be applied indiscriminately in the treatment of every kind of hemorrhage, although Renon (Soc. Med. Hop., Oct., 1913) has secured an arrest of hematemesis with the drug in several cases and Valassopoulo has checked a hemorrhage in the stools. Lesné is another man who has obtained good results with emetine in the treatment of hemoptysis.

Furthermore, it is likely that, as with the other hemostatic remedies used in similar cases (gelatin, serum, transfusion, and amyl nitrite) which have been studied during the last year by Nolf and Carnot (reported to the Medical Congress held in Paris in October, 1912), there will be a certain proportion of favorable results and of failures, depending upon the peculiar mechanism, the anatomical location of the lesion, and the severity of the hemoptysis under treatment.

THE THERAPEUTIC USE OF THORIUM X

In an article in the *Muenchener Medizinische Wochenschrift* for September 23, 1913, O. Meseth, of Erlangen, who used thorium X in the treatment of various diseases, recommends beginning with small doses, except in leukemia, where he recommends from the first a comparatively large dose, which may be increased (see *Brit. Med. Jour.*, Oct. 25, p. 1107). He advises 300 to 400 electrostatic units (1 electrostatic unit=1000 Maché units) to begin with. The highest dose he so far has given is 1000 electrostatic units.

In pernicious anemia, great care must be exercised, and Meseth usually begins in such cases with from 10 to 70 electrostatic units. Secondary anemias react well to small and medium doses. The best results obtained with thorium X were in rheumatic and other joint affections. Beginning with small doses, he either increased them gradually up to a maximum of about 500 or 600 electrostatic units, or continued the small doses for a considerable time. In small and medium doses thorium X was well tolerated for months.

He is not yet able to say whether it is better to administer the substance by intramuscular injections or by the mouth. The dose given by injection probably was more exact, but excellent results were obtained by giving thorium by the mouth. The latter method is cheaper; an injection of 100

electrostatic units costing about 25 cents, and the corresponding dose by the mouth about 12 cents.

He records the changes produced in the blood, and mentions some cases in which certain undesirable effects occurred, but they were rare and not severe. He strongly advises the employment of this substance in anemia (excepting pernicious anemia), sciatica, and chronic joint affections.

SACCHARIN IN PHOSPHATURIA

Dr. S. D. Hartman, Tippecanoe City, Ohio, a recent visitor to Ravenswood, tells us that 3 grains of saccharin given in 1-6-grain doses during twenty-four hours will cure phosphaturia. This is a novel suggestion. Has any other reader of CLINICAL MEDICINE had any experience with this remedy?

In this connection, we might suggest the value of atropine for phosphaturia. It is the best single remedy we know of for that condition.

COLONEL WOODRUFF JOINS THE STAFF OF "AMERICAN MEDICINE"

We are pleased to learn that Dr. Charles E. Woodruff, Lieutenant-Colonel in the U. S. Army, retired, is to become one of the editors of *American Medicine*. Our New York contemporary is adding a most brilliant man to its staff, one who has achieved things in sanitary and military medicine, has written numerous books and special articles, and studied, in advanced work of a high order, the role of climate in its relation to resistance to disease. We congratulate *American Medicine* upon securing Colonel Woodruff for its editorial department.

ROENTGEN AND RADIUM THERAPY IN UTERINE FIBROMA, MYOMA, AND CARCINOMA

According to Schoenberg, whose experience is reported in *The British Medical Journal* (Aug. 23, 1913, p. 451), x-radiation is of great value in the treatment of uterine myomas. He reported 33 cases brought to a successful issue, the average duration of treatment having been six and seven months. Doctor Schoenberg declares that there is a direct influence upon the tumor-cells, resulting in their degeneration or disappearance. It is admitted that not all of these cases are suitable to this treatment; still, the percentage of cures was very high.

At the same meeting of the International Medical Congress at which Schoenberg's experience was given, Dr. Foveau de Courmelles declared that early fibromata, even when of large size, yielded readily to x-rays applied externally through an aluminum filter. While Kroemer (of Greifswald) reported good results with mesothorium in uterine, vaginal, and rectal growths, Jacobs (of Brussels) found radium of considerable value in the treatment of uterine and vaginal cancer. Other speakers were not equally enthusiastic as to the value of these agencies; indeed, no definite cures of carcinoma were reported.

STANDARDS OF MEASUREMENT OF RADIOACTIVITY

Development of interest in radium and other radioactive drugs, which are now being largely used in therapeutics, especially in the treatment of arthritis deformans, gout, neuralgia, and similar diseases, as well as in the treatment of carcinoma, makes necessary some knowledge of the methods of measuring the dosage of this substance.

We learn from Dr. L. G. Rowntree, of the department of pharmacology of Johns Hopkins University, that at the last International Congress at Brussels the following units were adopted:

One curie equals the amount of emanation in radioactive equilibrium from one Gram of radium.

One millicurie equals the amount of emanation in radioactive equilibrium from one milligram of radium.

One microcurie equals the amount of emanation in radioactive equilibrium from 1-1000 milligram of radium.

The Germans have not altogether adopted this system and are using Maché's arbitrary unit of measurement. The Maché unit is 1-2700 of a microcurie. All measurements are made with the electroscope.

A NEW METHOD OF USING IODINE IN TUBERCULOSIS

Iodine is now generally regarded by surgeons as our most valuable antiseptic. It is natural, therefore, that physicians should be seeking new methods of giving this product in the treatment of infectious diseases, especially in tuberculosis, for which it has been employed for many years with varying degrees of success.

Dr. David Curle, of Glasgow, has devised

a very novel method of using iodine designed to increase its antiseptic power when taken internally. In a paper published in the London *Practitioner* for December, 1912, he suggested the method of intensive iodine treatment, which we shall describe herewith. This idea has been further developed by Curle in *The Medical Council* of November and December, 1913, and also in a paper published by Dr. Edward G. Reeve in *The Practitioner* for September, 1913.

The purpose of Curle's treatment is, to throw into the blood stream as large a quantity of iodine in solution as may be necessary to secure the desired antiseptic action. This drug is very conveniently given in the form of potassium iodide; but, unfortunately, this salt is not, in itself, antiseptic. Furthermore, according to Binz, only when the potassium iodide is given in doses not exceeding 4 grains every four hours is the iodine released from its combination as a vapor, through the oxidizing action of the oxyhemoglobin of the blood. And it is only in this manner that it gives rise to the characteristic symptoms known as iodism. The oxyhemoglobin available can break up only this minimal quantity; and, so, when larger amounts of potassium iodide are introduced, the iodine vapor is dissolved by the excess of the potassium iodide present and carried in the blood in solution—in which form it exerts its antiseptic action *without* causing iodism.

Hence, the iodine effect of potassium iodide as it is ordinarily administered is limited to the small proportion of iodine contained in the salt ordinarily disintegrated by the oxygen of the blood. The purpose of Doctor Curle's method of procedure is to break down a larger percentage of potassium iodide than this by adding to the blood some oxidizing substance. This he accomplishes by administering chlorine in solution.

Doctor Curle's method of proceeding is as follows: After breakfast in the morning, the patient is given 30 grains of potassium iodide in 5 ounces of water, washed down with clear water. Three to four hours later, after a meal, he then gives 1 ounce of a freshly prepared chlorine solution in 9 ounces of lemonade—in other words, a glassful.

The chlorine solution is made by putting 60 grains of dry potassium chlorate in the bottom of a dry 24-ounce bottle, adding 2 drams of strong hydrochloric acid, then corking and shaking the mixture, releasing the cork sufficiently to allow the escape of atmospheric air, corking again for fifteen minutes, then adding cold water, little by little, recorking, and shaking after each addition until the mixture is made up to 24 ounces. This constitutes the liquor chlori compositus of the United States Pharmacopeia.

The dose of the chlorine water is repeated at 2-hourly intervals until sufficient has been given; usually 3 ounces being administered daily, which is enough to oxidize a sufficient quantity of potassium iodide and generally produces signs of iodism; these signs passing off completely after the first four or five days.

By the method here described, a large amount of iodine, *in solution*, is carried by the blood stream to all the diseased areas, where it can exert its characteristic antiseptic action.

As a rule, phthisical patients who receive this treatment experience a slight accentuation of their symptoms during the first few days. The quantity of sputum usually is increased, tubercle bacilli are found in abundance, and there is a slight elevation of temperature. Apparently there is at first marked inflammatory reaction around all the infective foci in the body, and it is this that is responsible for the lighting up of the symptoms. However, this slight exacerbation is followed, within a few days, by a decided turn for the better. Expectoration is made easier; the cough grows less irritating and severe and is less troublesome at night; the temperature falls, changing for the better usually within a week; physical signs improve; and nearly all patients put on weight.

Doctor Reeve, who has had an experience with 76 cases thus treated, says that 10 patients who had completed three months' treatment put on 120 pounds in weight, in favorable cases the increase being about 12 ounces a week. In fact, only three of his patients failed to gain. Thirty-three percent of his patients who have been treated for three months or more are now tubercle-free, as shown by repeated examinations.

The same benefit follows in surgical tuberculosis as in tuberculosis of the lungs.

Doctor Reeve declares that this method of treatment produces its effects more rapidly than any other form of treatment of tuberculosis known to him, and with a minimum of risk. After the first week the patient does not need to be kept under continued surveillance and can continue his work. He says further that all his patients declare they sleep better, find great relief from the lessening of the cough and the ease of expectoration, while the appetite almost invariably improves. Like Doctor Curle, he advocates a more gen-

eral adoption of this treatment, and herewith it is commended to readers of CLINICAL MEDICINE for trial.

One of the members of the staff of this journal is now doing some experimental work with the intensive iodine treatment, though, he has modified it somewhat. He will be glad to correspond with any member of the "family" who may desire to give it a trial, and every physician having cases of tuberculosis not responsive to present treatment should try it. It seems to be one of the most promising methods recently suggested.

NOVEL IODINE TREATMENT OF WOUNDS AND ULCERS

A. Reuterskiöld proposes, in *Hygiea* (May, 1913) a treatment of wounds, septic as well as aseptic, with a nascent iodine that is produced in the affected area in a novel manner.

The patient is given sodium iodide, by the mouth, in doses ranging from 1-2 to 1 Gram (7 1-2 to 15 grains) every four hours. Then, from the iodide circulating in the blood, iodine is set free in the wound by the local application of hydrogen dioxide. In order to prevent the free caustic alkali (the soda minus the iodine) attacking the tissues, a little—1 percent—of acetic acid is first added to the hydrogen-dioxide solution, this converting the soda into the harmless sodium acetate. The iodine being in the nascent state, it exerts a powerful and direct influence upon the wound and its abnormal contents.

To use this iodine mixture, moist gauze is applied to the wound and then the hydrogen dioxide and acetic acid solution is allowed to flow into the dressing very slowly through a gauze wick, so as to keep the wound constantly moist with it.

By this method of treatment, Reuterskiöld succeeded in curing a number of very intractable cases of varicose ulcer which had resisted all the previous expedients. It is also employed in skin grafting, after amputation of the breast for cancer, in empyema, paronychia, and in other simple surgical conditions. Compare the preceding article.

TO PRESERVE RUBBER INSTRUMENTS

The cause of the deterioration of rubber goods is the acid formed by the oxidation of the sulphur in it. Hence, frequent boiling in water or keeping the articles immersed in glycerin, for instance, is a good precaution. Immersion in ammonia also serves; but generally there are objections to such processes. It may be well to remember, however, that a good way is, to enclose the goods (especially if kept for sale) in tight receptacles and place with them a generous amount of unchanged ammonium carbonate in not too small lumps. The crystalline salt gradually decomposing, the free ammonia vapor neutralizes any sulphur acids generating.

This method, while not new, has lately been freshly recommended by one who has tried it out. Remember, though, that the ammonium carbonate loses in virtue as it decomposes, the white powder (of the bicarbonate) to which it crumbles being worthless; hence, the supply must be replenished.

CYMARIN, A NEW CARDIAC AND VASCULAR REMEDY

Cymarin, the active principle of apocynum cannabinum, has been employed by Dr. Marie Schubert (*Deut. Med. Woch.*, 1913, p. 540; through *Pharm. Zentralh.*, 1913, No. 26) and found a very satisfactory remedy in diseases of the heart and blood-vessels, ascribing to this glucoside the same remedial properties as we find laid down in American textbooks for the mother-plant, Canadian hemp (erroneously also called Indian hemp).

In general, Dr. Schubert places this drug between caffeine and the digitalis principles, but approaching the latter in action, and thinks it will acquire a position alongside of digitalis, more especially because of its more positive dosage. In doses of 0.2 to 0.3 mg., cymarin, when administered intravenously, acts strongly diuretic—more so than diuretin. Effectual influence upon the heart becomes apparent only after doses of 3 or 4 mg., when the pulse grows more full, stronger, and slower; dyspnea is relieved; rapid action, though, occurring only after intravenous injection. Untoward effects were not observed. Taken internally, the drug acts more slowly and less powerful than digitalis.

ATROPINE TREATMENT OF LEAD COLIC

In the treatment of lead colic, Mathieu says, four years ago he gave up the use of tincture of belladonna because it was so often rejected by vomiting and was uncertain in effect, and substituted hypodermic injections of atropine. This means he employs in his hospital service in the treatment of lead colic, after one or two sedative injections of morphine (see *Paris Medical*, Nov. 1, 1913, p. 505).

The atropine is begun on the second day with 1-2 milligram (1-128 grain) doses morning and evening, then increased to three times a day. Hot compresses are applied to the stomach. A small quantity of water is given the patient in tablespoonful doses. Nothing else whatever is permitted—neither enemas nor purges.

After the first day, thanks to the morphine, and after the second, thanks to the atropine, the patients are relieved, vomiting becomes less frequent, and ceases entirely from the third to the fifth day, according to the intensity of the case; sometimes ceasing immediately when the attacks are slight. Thereupon the patient can begin taking small quantities of milk diluted with water. After vomiting and pain have entirely ceased, a mild laxative is administered. After the bowels have moved, the attack may be considered at an end.

Mathieu believes that this method of treatment is infinitely less distressing to the patient than the classic purgative treatment. The method employed at the Charité hospital, with its repeated drastic purgatives given by the mouth and the rectum, was, he says, a useless torture, which increased the suffering of the patient and prolonged his disease.

ATROPINE SULPHATE IN PYLORIC SPASM

Both belladonna and its alkaloid, atropine, according to Mathieu (see *Paris Medical*, Nov. 1, 1913, p. 503), present a threefold action that warrants their extended use in gastrointestinal therapy: they relieve pain, they are antispasmodic, and they arrest secretion. He finds atropine particularly useful in relieving the pain of the pyloric spasm so common in ulcer of the stomach. In these cases, there is delayed pain, relieved by food and alkalis; excessive secretion of hydrochloric acid; and the reduction of fluid in the stomach in the morning, together with the presence of a small quantity of alimentary detritus. This syndrome characterizes an incomplete stenosis of the pylorus due to ulcer at this point or near it.

Formerly Mathieu employed exclusively the tincture of belladonna in this condition, beginning with moderate doses and gradually increasing until the characteristic signs of intolerance were noticed; namely, marked dryness of the mouth and throat, dilatation of the pupils, troubles of accommodation, making reading impossible, vertigo, and ringing in the ears. Of late years, however, he has come to prefer the daily injection of 1 to 3 milligrams of atropine sulphate, giving it in increasing doses until the first signs of intoxication are produced. The patients are, at the same time, placed upon the regimen advised by Senator, who recommends the free use of fatty substances, particularly fresh butter and cream.

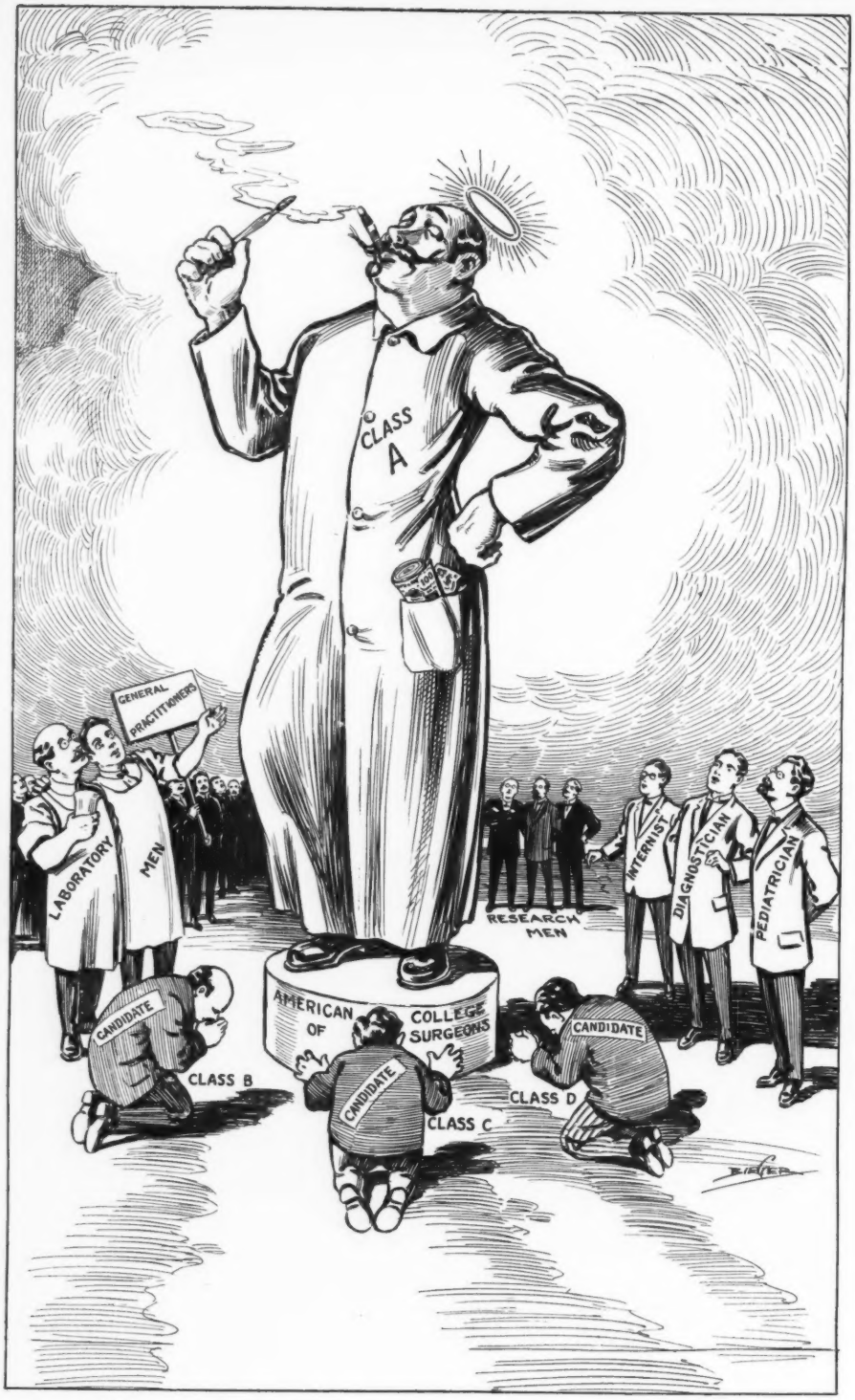
Mathieu begins with 1-4 milligram (1-250 grain) of atropine sulphate three times daily. Next day he injects 1-2 milligram (1-128 grain) morning and night; the third day, if there are as yet no signs of intolerance, three injections of 1-2 milligram each, making a total of 1 1-2 milligrams of atropine sulphate in twenty-four hours. This quantity rarely is exceeded.

By this method of treatment, Mathieu is able to subdue the pain and bring the patient to a better condition for operative intervention. He does not advise, though, as does Schick, that this method, however excellent the results, should be substituted for surgical treatment. It is particularly indicated when there is severe gastralgia and hypersecretion, gastric intolerance, and repeated and uncontrollable vomiting.

Of course, the patient should be kept absolutely quiet in bed, and hot applications should be made to the epigastric region. No food whatever should be allowed to enter the stomach; but neither does Mathieu advise rectal feeding, on account of the reflex disturbance of the stomach it is likely to produce. Any loss of fluid is replaced by subcutaneous injections of physiologic salt solution, and, on occasion, of glucose "serum."

PAINLESS INJECTIONS OF MERCURY BICHLORIDE

After an extensive trial of his method of giving hypodermic injections of mercury bichloride, Doctor Watson, of St. Louis (*Med. Brief.*), recommends it as being practically painless, and but rarely giving discomfort; there, also, he claims, is very little local reaction. Dr. Watson heats together 2 parts of mercury bichloride and 2 parts of quinine-urea hydrochloride in 96 parts of fresh distilled water, which forms a clear solution. This solution (containing 2 percent of each drug) he administers hypodermically while it is still warm; for, it will separate out crystals upon cooling. The ingredients will not enter into clear solution in the cold, hence, the directions for heating.



"ON WHAT MEAT DOTH THIS OUR CÆSAR FEED THAT HE IS GROWN SO GREAT?"

Miscellaneous Articles

The Clinical Congress of Surgeons of North America

THE fourth annual meeting of the Clinical Congress of Surgeons of North America was held in Chicago this year, November 10 to 15. Last year, in New York, at the third meeting, 2600 men attended. This year in Chicago more than 4200 registered. Unfortunately this large attendance far exceeded all anticipation, and, as a consequence, the hotel accommodations arranged were insufficient, while, what was even more to be regretted, many of the clinics were so crowded that good men who had come from distant parts of the country found it impossible to observe the operative work which they had come to see. To prevent this annoying overcrowding, it became necessary to issue special tickets for about forty different clinics. The demand was so great for clinics of men like Murphy, Ochsner, Bevan, and a few others that tickets were given out according to priority of application and it was made impossible for anyone to attend the leading clinics more than once during the course of the Congress. Naturally, this arrangement created much dissatisfaction, unavoidable though it was.

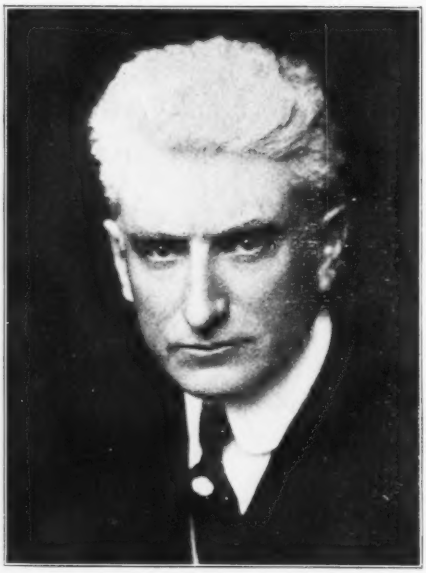
However, in spite of these and other drawbacks, this meeting undoubtedly was a very great success. Some magnificent work was shown, demonstrating again that Chicago is the surgical center of the world. The evening sessions of the Congress were generally excellent. On Monday night Dr. Edward Martin, retiring president, delivered an address, and Dr. George E. Brewer discussed pyloric closure in gastroenterostomy. Dr. Harvey Cushing reported 150 Gasserian ganglion operations. The following evening Dr. John B. Deaver, of Philadelphia, read an interesting paper upon gastric hemorrhage, in which he devoted much care to the discussion of the differential diagnosis between gastric ulcer and carcinoma of the stomach. This paper was discussed by Dr. A. J. Ochsner, of Chicago. On the same evening Herbert J. Paterson, of London, discussed the subject of gastrojejunostomy, the operation for the establishment of an artificial passage between the stomach and jejunum. In his paper, Doctor Paterson declared that in less than three percent of his cases of ulcer of the stomach in which this operation was applied did malignant degeneration follow. He disagreed with the Mayos as to the frequency with which carcinoma is grafted upon stomach ulcer.

One of the most interesting sessions of the Congress was the symposium upon radioactive treatment of various kinds, the subject that was discussed Wednesday and Thursday nights. Among those taking part were Profs. Bernhard Kroenig and C. J. Gauss, of the University of Freiburg, Germany, and Prof. Howard A. Kelly, of Baltimore. The German physicians demonstrated their technic of radiotherapy in the treatment of cancer, at Wesley Hospital.

In the discussion of this subject, Doctor Kelly told of the treatment of forty cases of cancer. He declared that two cases of carcinoma of the breast seemed to have been cured by the use of radium. This substance also is sometimes curative, he declared, in cancer of the nose, eyes, and lips; and it will produce good cosmetic results where surgical measures would mutilate and disfigure. Doctor Gauss said that the x-ray, radium, and mesothorium had all been used in Freiburg with excellent results, both temporary and permanent.

Dr. Thomas S. Cullen, of Baltimore, sounded a word of warning, saying that nothing is more to be feared than the use of radium in nostrums of any kind. "Radium should be standardized, so that the buyer knows what he is paying for," he continued; "and only time will tell what percentage of cases can be cured with radium." At present early surgical operation affords the best chance for cure. However, the results obtained from radium must be taken into consideration.

DR. JOHN B. MURPHY, Chicago
New President of the Congress



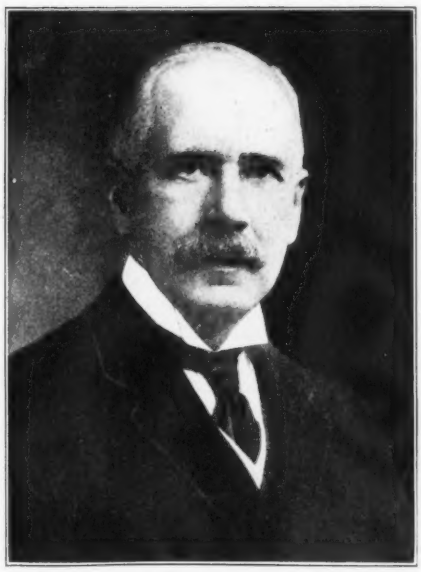
DR. FRANKLIN H. MARTIN, Chicago
Secretary of the Congress

At one of the most interesting sessions of the Congress, on Thursday evening, the subject of cancer was discussed. At this session, a committee appointed the year before and consisting of Dr. Thomas S. Cullen, of Baltimore, Dr. E. C. Dudley, of Chicago, Dr. C. J. Miller, of New Orleans, Dr. F. P. Simpson, of Pittsburg, and Dr. H. C. Taylor, of New York, made a report upon the cancer-problem, the purpose being to institute a campaign of publicity to be instituted among the people concerning the prevalence of this disease and the possibility of cure by early operation.

At this year's meeting, Mr. Frederick L. Hoffman, of Newark, N. J., stated that approximately 75,000 deaths from cancer were recorded in the United States in 1913. The average age at death from this cause was 59 years. Deaths from cancer amounted to 8.6 percent of the mortality from all causes at the age of 45 and over. For the decade ending with 1911, the cancer death rate has increased, from 65.8 per 100,000 of the population in 1901, to 83.9 in 1911. Various methods of publicity were discussed. Samuel H. Adams took up publicity through the lay press; Dr. Edward Reynolds, publicity and education through the American Society for the Control of Cancer; and Dr. Frederick R. Green, publicity and education through the Council on Health and Public Instruction.

At the last scientific session of the Congress, Dr. J. M. T. Finney, of Baltimore, discussed pyloroplasty, Dr. Charles H. Mayo, of Rochester (Minnesota), the goiter question, and Dr. J. F. Binnie, of Kansas City, the uses of fat in surgery. Space is lacking to give details concerning these papers, all of which, however, were excellent. In addition to the general papers, a number of other interesting surgical subjects were discussed in a division devoted to surgical specialties, including diseases of the eye, throat, and ear. Dr. Robert H. Elliot, of Madras, India, was an interested participant in the ophthalmologic section, and showed his much-praised operation for glaucoma at one of the clinics.

A good-sized book might be written about the cases shown at the different clinics during the session of the Congress. It almost seems unfair to select any one, since excellent work was shown in all. However, undoubtedly Dr. John B. Murphy's clinic was one of the principal attractions of the meeting. This clinic, at Mercy Hospital, was in continuous session from 9 a. m. to 6 o'clock p. m. every day during the Congress, and the work was done by Murphy, Andrews, Tivnen, Mix, Kreuschner, Zapffe, Hochrein, Barnes, Morgan, Sawyer, besides a number of visitors,



SIR W. ARBUTHNOT LANE
London, England

PROFESSOR REINHOLD KROENIG
University of Freiburg, Germany

who demonstrated various specific methods of surgical procedure. Almost every conceivable variety of operation was done at this clinic alone. In addition, Doctor Murphy's assistants gave clinical talks: for instance, Kreuschner, on vaccine therapy and artificial pneumothorax; Zapffe, on Murphy's formalin and glycerin treatment of arthritis; Hochrein, on the value of the Roentgen-rays in diagnosis; not to specify further.

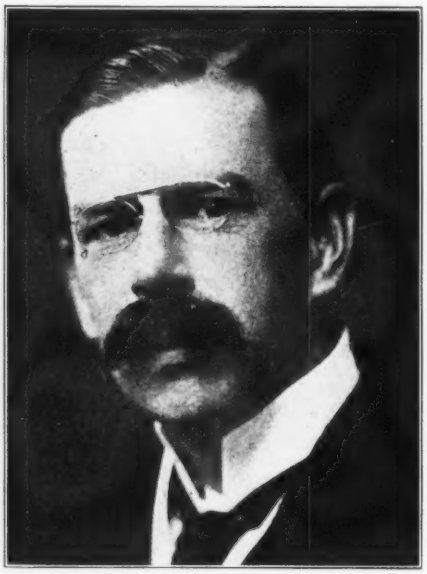
A similar crowd rushed to see the work of Ochsner and his assistant, Dr. N. M. Percy, at the Augustana Hospital; and at the Presbyterian Hospital, there was a combined surgical and medical clinic, conducted by Arthur D. Bevan and Frank Billings, with the aid of assistants and associates. This was a great attraction to men interested in medical as well as surgical work.

We might go on indefinitely with regard to the larger hospitals, but a word certainly should be said of clinics held in the smaller hospitals of the city, which, while less crowded, certainly were equally attractive. Of those concerning which we have personal knowledge, we may mention the Ravenswood Hospital, where an interesting clinic was conducted by Dr. George W. Green; the Maimonides Hospital, where some fine surgical work was done by Dr. Benjamin H. Breakstone; and the Frances Willard Hospital, where Dr. J. D. Fowler operated upon some very interesting cases. The Cook County Hospital clinics also were crowded. Many of the hospitals not only provided special facilities for the attending surgeons, but a number also gave entertainment for the inner man, free lunches being served at Wesley, Mercy and numerous other institutions.

The feature of the Congress which has attracted the most attention in the lay and medical press was the organization of the American College of Surgeons, which was perfected at this meeting. Sir Rickman Godlee, president of the Royal College of Surgeons of England (after which the American organization is patterned), was present and delivered the inaugural address. In the neighborhood of 1050 American surgeons became charter-members of the newly established college, among them 106 Chicago men. While the names of the majority of the surgical leaders of Chicago are found in this list, a very considerable number are equally conspicuous by their absence.

Nothing which has occurred in recent years has, apparently, stirred up the medical profession in this country so much as the organizing of the American College. While its ideals undoubtedly are high and the

DR. CHARLES H. MAYO, Rochester, Minn.



DR. HERBERT J. PATERSON, London, England

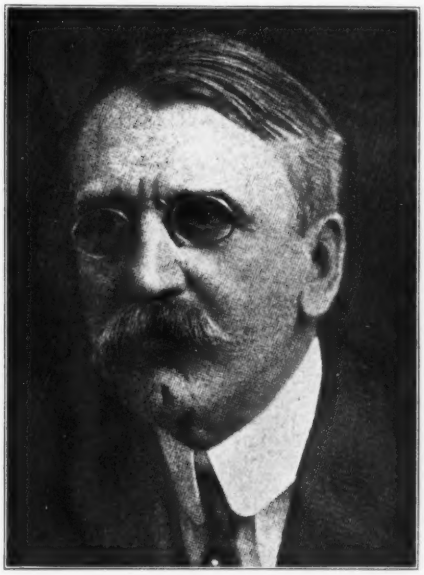
intentions of its organizers we must assume to be of the very best, there certainly are some very pertinent objections to this body. These patent objections have been conservatively stated in the editorial in this issue of CLINICAL MEDICINE, as also in the cartoon we show on another page. They may be crystallized as follows: (1) the organization is undemocratic; (2) it attracts special lay attention to one branch of the profession and to a restricted portion of that branch, to the apparent detriment of other branches; and (3) it seems to be causing a dangerous schism in the profession at a time when unity is most desirable. Articles pointing out these positive dangers have appeared in numerous medical publications, among them the *Bulletin* of the Chicago Medical Society and *The Illinois State Medical Journal*.

One feature of the College which has been much criticized is the division of surgeons into classes A, B, C, and D. In justice to Dr. Franklin H. Martin, it should be stated that in a newspaper interview he has denied that it was the plan of the College to grade in classes the surgeons who became fellows. This is what he says about it:

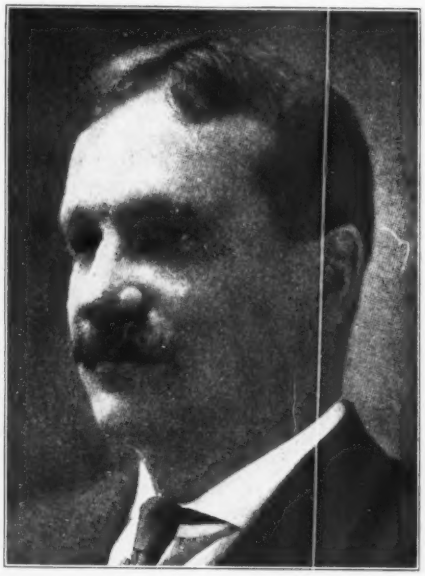
"We started out with Classes A, B, C, and D, it is true; but that classification was only for the purpose of organization. I made a mistake, I realize now, in using the word 'class' in working out the plan of organization. I should not have used that word. I should have used the word 'group,' and each time I used it I should have explained that the term was used only for purposes of organization. The truth is that there will be absolutely no classes or groups among the fellows of the College after the organization has been perfected. All will be on the same footing. It doesn't matter whether it be the most distinguished surgeon admitted as an honorary member or the most inconspicuous young man admitted ten years hence by examination. After they are fellows they will all be in the same grade."

The first president of the American College of Surgeons is Dr. J. M. T. Finney, of Baltimore. The membership of the first board of regents is: George E. Armstrong, George E. Brewer, Herbert A. Bruce, Frederick J. Cotton, George W. Crile, J. M. T. Finney, William D. Haggard, Edward Martin, Franklin H. Martin, Charles H. Mayo, Robert E. McKechnie, John B. Murphy, Albert J. Ochsner, Harry M. Sherman, and Charles F. Stokes.

Dr. John B. Murphy was elected president of the Congress for the ensuing year, and Dr. George E. Armstrong, of Montreal, vice-president. The other officers were reelected. The next meeting of the Clinical Congress of Surgeons of North America is to be held in



DR. JOHN B. DEAVER, Philadelphia



DR. J. M. T. FINNEY, Baltimore

London. While it is stated that this place was chosen because the American surgeons desired to become acquainted with English surgery, and although the American surgeons were invited to meet in London (July 25, 1914) by 52 leading London hospitals, it is talked quietly among those who know that it was thought to be diplomatic not to meet in America next year by reason of the unfortunate chaotic management of the clinics at the Chicago meeting, which, as stated, caused much dissatisfaction. By year after next, it is hoped, conditions will be more favorable.

The commercial exhibitors at the Congress were generally unanimous in declaring that their end was a fizzle, because few had time to attend the exhibit hall. The rush for tickets to the clinics began at 8 o'clock in the morning, and so much time was necessary to secure these—as the ticket issuers were so scattered around the different portions of the hotel—that by the time the average man secured his ticket he had to hustle out to the clinic. However—better luck next time.

In spite of all the misunderstandings and bitterness which have grown out of the Chicago meeting of the Congress, we have good reason to feel proud of American surgery, and especially of Chicago surgery. As *The Chicago Tribune* stated in one of its editorials: "It is not a chauvinism to assert that American surgery leads the world. It is a fact. For a decade or more, what may be called the tide of surgical travel, the surgeon's pilgrimage, has been toward America, just as the physician's or the research-worker's pilgrimage has been away from us, to Germany, to France, to Great Britain. The frontier work of modern surgery has been done here in our country, and the most progressive workers in this field abroad have been coming to America for suggestion, instruction, and inspiration. And American surgery is not an affair of the last decade, by any means."

VALUABLE HINTS ABOUT EMETINE, APOMORPHINE, CACTUS, AND OTHER THINGS

Some years since, Dr. R. C. Kenner—in *The Therapeutic Record*—wrote interestingly on the treatment of dysentery, and concluded: "If all these drugs fail, try ipecac." And someone queried, "Why not ipecac at first?"

After this, I opened the battle with emetine in the treatment of putrid dysentery, that fatally virulent disease, giving a grain dry on the tongue, with the patient flat in bed, and denied any liquid after it for an hour. Emesis is not provoked three times in a hundred cases, but a liberal purge rarely fails to occur. The strangest feature is,

that many times this ends the treatment in a perfect cure. The dosage of emetine to follow the purging was, as a rule, not taken as directed, because at the conclusion of the purge there was no symptom of disease left.

My rule is, to follow the action of the emetine with sulphocarbolate of zinc—our best astringent and an intestinal disinfectant second to none in use. It is in my absence that nothing but emetine is taken, the people deeming further medication unnecessary after the disease disappears.

I frequently employ the emetine in diarrhea, where it acts no less successfully than in the treatment of dysentery.

Once in a great many cases I find it necessary to repeat the dose till 4 grains have been taken—strangely without causing emesis.

I see in my French medical journals that emetine is being used hypodermically extensively by the French faculty, in the treatment both of dysentery and diarrhea, and with incredible success; and the Spanish *Revista de Hospitales*, published at Hospital Juarez, Mexico City, reports results equally satisfactory from the hypodermic use of emetine.

Undoubtedly the irritating property of the ipecac root is got rid of in the process of isolating the emetine, or emesis certainly would be inevitable.

I use no other drug for inducing emesis than apomorphine by the rectum, which acts promptly and effectively. I seldom resort to this in others than in peons who have gorged themselves with raw new rice in the field or with the pulp of cacao fruit. Thus I can treat half a dozen in the time the hypodermic syringe would be preparing for the first case; and there have been more than a dozen of those semi-savage Indians to be relieved in one evening on a big plantation.

Emetine has lent me precious service in the treatment of gastric fever, and more especially in typhoid fever, in which, I am sure, there is a broad field for its useful application.

Emetine would have to be administered hypodermically in the treatment of infants and little children, where it would be difficult to employ the dry substance effectively. However, I rarely use the emetine among the little folk; following practical elimination with appropriate dosage of copper arsenite, white of egg dissolved in lemonade, and sulphocarbonate of zinc. White of egg is a nutrient of high degree, which, with whey of clabber or buttermilk, rarely admits the undertaker into the distressful scene. It is only mothers who are college-bred or of fashionable-society predilection who give me solicitude about the proper diet for their babes in convalescence; the middle-class and peon mothers seldom fail to supply an abundance of healthy milk.

I make use of enemata obedient to circumstances and necessity in the treatment of the little ones, the indicated antiseptic being given in lemonade; this probably being superior to any drug known to the profession; for lemon-juice may be introduced in clysters of a strength to kill every germ of Asiatic cholera it reaches, without prejudice or inconvenience to the patient—an accomplishment that would require any other substance of unbearable strength.

The copper arsenite is prophylactic passing ordinary credence (even in a dilution as great as 1 : 3000 given in drinking water), in epidemics of cholera or dysentery. This apart from its curative value.

Some twelve or more years ago I drew flaying criticisms from some French, English, and American leading medical journals by affirming that cactus grandiflora was a precious substance in the treatment of anemia, more especially such as follows these putrid dysenteries and pernicious fevers, by virtue of its inhibitive action against congestion and masterful influence over the equilibrium of the circulation—a matter valuable beyond computation in such precarious critical state of convalescence.

And now comes along Professor Lloyd, of Lloyd Brothers, Cincinnati, and assures the profession that, of a multiple array of physicians who answered questions submitted to thousands as to the medicines most used, cactus stands at the head of the list by a considerable majority.

I had been employing it in all the intervening years, never dreaming that it had gained such well-merited popularity in the face of such scathing criticism. I use it straight along for six months, sometimes, as an auxiliary to strychnine arsenate and iron arsenate; and have had the gratification of watching skeletons develop to a passable human anatomy. It is a very fine element of treatment for those chlorotic girls who never have menstrated long after their natural time; and I often have such patients.

It were well to remember not to use pine-apple- or lemon-juice soon after milk food has been ingested, as either is liable to curd the milk; but milk may be taken soon after either of such acids, as they are quickly neutralized in the stomach.

This wonderful ipecac, which I started out to discuss but got switched off on other vitalizing substances, yields "wine of ipecac," one of the best antivomit preparations known to the profession; it has arrested black-vomit for me a number of times.

Tincture of iodine is a dependable anti-hiccough remedy, often saving otherwise hopeless victims for me.

I have had incredible success with the anasarcin treatment of dropsy; four cures this year, each patient swollen equal to an over-gorged toad.

I had one very remarkable case, vicious for eight years, this subject eating soap and drinking kerosene. When I first saw the man his scrotum resembled the inflated bladder of a big bull, less than one-quarter the head of the penis being visible; and the huge sac was full of thick offensive pus; which I evacuated. The scrotum was rotten and sloughed off promptly, leaving the testicles bare. The process of decomposition was arrested by the application of my phenol compound, and in twenty days a new scrotal covering formed under the influence of a powder composed of starch, 10 parts; zinc oxide, 4 parts; naphthaline, 2 parts; acetanalid, 1 part. The dropsy disappeared in a week. But the fellow's blood was exhausted and the faculty of making more destroyed; hence, he died thirty-five days after I first saw him.

I follow anasarcin with calcium sulphide, and this with iron arsenate.

This deadly contagious dysentery I persist in designating as "putrid," owing to its rotten, gangrenous character, while "amebic" might probably be more ethical; although I am unable to deny or affirm the presence of the amebae, which, if not the primary cause, certainly could not aggravate the fearfully loathsome disease.

The most fatal disease we have is war, on a small scale, here; yet thus far incurable, although the rebels have had several apparent Waterloos within the past three months; still, they rally small bands and continue their depredations at a safe distance from the federals. One of their latest enterprises consists in seizing hostages and holding them for ransom, one of them being killed by the federals in a sudden attack made on the rebels the other day.

ROBERT GRAY.

Pichucalco, Mexico.

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[Since this article was received, Dr. Gray has written us a long letter, in which he tells us something about the situation in unhappy, war-devastated Mexico. This appears on page 85. He lives in the southern part of the republic, on the Isthmus of Tehuantepec, one of the most unhealthful portions of the country. Few men have had so wide an experience with tropical diseases as Dr. Gray.—ED.]

HE READS "THE CLINIC" TWICE

I value your journal highly. I think it the best of eight medical journals that I take. I read it as soon as I get it, let it lie on my desk a week or two, then read it again and note down in a reference-book the points I think will aid me to be a better doctor. You are doing a great work, and I trust you may long be spared to help us.

J. W. ALBAUGH.

Mingo Junction, O.

CATAPHORETIC TREATMENT OF ECZEMA

Last March a woman suffering from chronic eczema of five years' standing came to me for treatment. She had been under the care of some of the best physicians of Montreal and had received every possible course of internal and external medication, without any apparent benefit. The oval patch of about ten square inches of skin situated on the forearm was red, tender, and elevated above the surrounding healthy area.

I gave this patient eight x-ray treatments of from fifteen to twenty minutes' exposure each, then followed with the high-frequency current and cataphoresis, using a solution of potassium iodide. These treatments every two or three days were continued for a period of nearly a month, when they were discontinued.

I examined my patient six weeks later and to my delight and astonishment I found that the redness and elevation had entirely disappeared, leaving only a slight greenish discoloration marking the site of the eruption. This color gradually faded.

While I shall not attempt to explain how the cure was brought about, the fact remains that she is cured and that electrotherapy did the work. No medication whatever was employed. This experience with others equally successful gives me substantial faith in electrotherapy, with which I am achieving results quite beyond the scope and power of ordinary medication.

In conclusion, I want to say that I have secured much practical help in my electrotherapeutic work from articles which appeared in CLINICAL MEDICINE last year. Those by Dr. H. C. Bennett, of Lima, Ohio, were of great interest and profit to me and I have followed his suggestions with success and satisfaction to myself and patients. I want to add that CLINICAL MEDICINE has become an indispensable requisite to me and I shall continue to subscribe for it as long as I am interested in the active practice of medicine.

T. J. JAMIESON.

Morrisburg, Ontario, Can.

DAUN KOMIS KODJING: A JAVANESE REMEDY FOR GALL-PASSAGE DISEASE

Allow me to add a word to the item printed on page 928 of your November issue about the plant daun komis kodjing there recommended as a new remedy for gallstone-disease. Perhaps this plant and its uses are new to Doctor Hagelweide, but to those who happen to have spent years in the Sunda Islands the plant is quite familiar, it being offered for sale at all passars, or markets, in those regions. It is differently named in the different islands; but as to the "daun," this is also written "daan" or "daoen," and means leaves. In Java the name is "temoe lawah" or "temoe lawak." In the fourth edition of the Dutch Pharmacopeia, its Latin official name is given as rhizoma curcumœ javanicæ.

The drug is taken as a tea (infusion of 1: 10) for diseases of the liver or the gall-bladder, and it really has fine healing qualities. There are in use the extractum, the oleum, and the pulvis temoe lawak. I have made the extract into pills for the use of sufferers from gallstone.

The natives use temoe lawah in different forms, but seem to dislike the infusion. I remember visiting a Malay who had cirrhosis of the liver. Seeing some temoe lawah in his room, I made some of the tea and told him to drink of it now and then. When I offered him the first cup he refused.

"Why won't you drink it?" I said. "It is good."

He answered, "*Sebab poenja obat tida enak*" —"Your medicine tea tastes too bitter."

The next day I found him chewing little slices of the root, which he seemed to relish. The man got well.

E. ZWIGTMAN.

Niles, Mich.

[It will be observed that this plant is, generically, a curmuma; that is, it is allied to the familiar yellow rhizome turmeric, the basis of curry powder. But turmeric (never, never, pronounce it "tumeric"!), a relative of ginger, has a pungent, spicy taste; and this accounts for the similar qualities possessed by the temoe lawah root, a specimen of which Doctor Zwigtman kindly mailed with his interesting letter.

These facts, however, lend themselves to speculation. The gingers and turmerics are aromatic stimulants, and as such are favorite stomachics. Hence, any possible cholagog and anticholangeitic virtues displayed by the plant in question may reasonably be ascribed to those properties.

But here is another pointer. The doctrine of stigmata has played quite a role in the healing-art, and—turmeric is yellow—and in stoppage of the bile the person's skin becomes yellow—and, so, turmeric once was a "wonderful cure" for jaundice—and—well, daun komis kodjing is, botanically, of the genus curcuma, family of zingiberaceæ. Oddly, while even German materia-medicas discard the idea of turmeric being a cholagog, we find it perpetuated in "Merck's Manual," where its virtues are given as "hepatic stimulant" and "tonic in jaundice."—ED.]

ARMY OFFICERS VISIT THE SLEE LABORATORIES

Last Labor Day Major General Barry, commanding the Eastern Division of the United States Army, and his staff made a visit to the Slee Laboratories at Swiftwater, Pa. In the picture shown on this page may be seen the faces of Major General Thomas H. Barry and Colonel Alfred S. Bradley, M. C., chief sanitary officer of the Division. They are standing at the front door of Dr. Slee's beautiful stone bungalow. In the midst of the group of army officers are Mrs. Slee and Miss Hunt, and Mr. Arthur M. Slee also appears in the picture.

While they were at Swiftwater these officers made a careful inspection of the Slee Laboratories, in which they were greatly interested. Dr. Richard Slee, the founder of these laboratories, is an enthusiast regarding army work in general, and the Army Medical Corps in particular. As every reader of this journal knows, Dr. Slee, who is one of the editorial staff of CLINICAL MEDICINE, is a lieutenant in the Medical Reserve Corps, United States Army. In the latter capacity, he had charge of the third sanitary division

ARMY OFFICERS VISIT DOCTOR SLEE

Rear, from left to right: Arthur M. Slee; Lieut. H. C. Vanderveer, 3rd Field Artillery; Lieut. Col. William E. Horton, Quartermaster's Corps; Major Frank H. Lawton, Quartermaster's Corps; Lieut. Col. Alfred E. Bradley, Medical Corps; Col. W. A. Simpson, Adjt. General, dept., Miss Edna Hunt; Maj. Gen. Thomas H. Barry, Commanding Eastern Division; Mrs. Richard Slee; Col. William G. Haan, Chief of Staff; Col. William M. Black, Chief Engineer Officer.

Sitting, left to right: Col. John B. Ballenger, Chief Quartermaster; Maj. Albert E. Truby, Medical Corps; Lieut. Col. Alfred M. Hunter, Inspector General's Department.

at the Gettysburg Veterans' Reunion, last July.

The Slee Laboratories are located but a few miles from the Third Field Artillery Camp at Tobyhanna, Pennsylvania, Major Charles P. Summerall commanding. This makes it a convenient place for army officers to drop in, something that all of them seem to enjoy doing.

During the visit of General Barry and his staff at Swiftwater, light luncheon was served at Dr. Slee's home by Mrs. Slee and Miss Hunt.

OUR OWN MUNCHAUSEN!

I do not profess to be able to excel the celebrated Munchausen in any of his famous stories, but that story in December CLINICAL MEDICINE about the woman who swallowed her watch which was subsequently recovered from her stomach where it was having the time of its life, is a good one, and reminds the writer of one he once heard when a youngster related by an old sea captain.

He said that on one of his voyages across the Atlantic an immense shark was observed following his ship day after day, and getting outside of every morsel of food that was thrown overboard. They had a number of fowls on board, and one day an old hen escaped from the coop and flew overboard, disappearing down the shark's gullet. Several weeks afterwards the shark was captured with a hook baited with a piece of salt junk, and on being handed on board and cut open, what should they discover but that same old hen with a brood of chickens which she had just hatched out!

Next!

JUNIUS.

——, Connecticut.

RADIUM RESOURCES IN AMERICA

It will be of interest to readers of CLINICAL MEDICINE to know that twenty-seven mining claims in Colorado have been secured by the National Radium Institute, an incorporated body headed by Dr. Howard A. Kelly, of

Baltimore. These claims are located in Paradox Valley, said to be the richest radium-bearing region in the world. The Institute will conduct experiments in extracting radium in Colorado, in a plant to be erected near the mine. The scientific staff of the U. S. Bureau of Mines will direct the technical operations.

The special purpose of this new institute is, to carry on a series of extensive experiments as to the therapeutic value of this substance. The clinical-research side of the work will be conducted, it is reported, in the General Memorial Hospital of New York City, to which a sufficient quantity will be supplied for experiment and for actual use in treating disease. Any surplus will be distributed to Johns Hopkins and other hospitals. None is to be exported, and probably none sold.

There are some who believe that in radium we have the solution to the grim problem of cancer. While, perhaps, this is too much to hope, nevertheless it is encouraging to know that the full possibilities of this strange substance are to be studied, and, if possible, determined.

We shall have considerable material of interest concerning the therapeutic application of radioactive bodies during the next few months. We also hope to get the experience of our readers in this interesting field.

BICHLORIDE OF MERCURY POISONING

A woman, 32 years of age, took two bichloride of mercury tablets in mistake for a popular laxative cold tablet. Realizing her error, she drank a pint of mustard-water, then sent for me. She had vomited rather freely, as I learned, but complained of intense burning in the stomach and of a strong metallic taste in the mouth.

After getting her to take the white of six eggs, I gave a hypodermic injection of apomorphine, and emesis was prompt. More egg-white was given, and this was repeated for two hours every time she vomited. She felt exhausted and weak, but the burning sensation in the alimentary tract was markedly lessened. After that, bismuth subnitrate was given in milk freely, and this shortly was followed by two tablespoonfuls of castor oil. Mercurial gingivitis and salivation were marked for a week, but recovery was uneventful.

R. J. Smith.

Bancroft, Ida.

[Physicians ought to do something to stop the use of bichloride of mercury as a *popular* household antiseptic. For physicians, it is a valuable remedy; but we doubt if it should ever be placed in the hands of a layman, for any purpose whatever. "Familiarity breeds contempt," and the person who has the deadly stuff around is likely to become careless with it sooner or later. The box of tablets some day or night is left on the bureau or on the shelf in the bath-room, and since, in the dark, it *feels* exactly like the box which contains the household supply of aspirin, phenacetin or "laxative cold tablets," it is the easiest thing in the world for some unfortunate member of the family to pick it up and bolt the poison without taking time to taste, smell, or think.

One of our correspondents, commenting on this matter in a personal letter, compared the carelessness of the individual accustomed to these household poisons with that of the workman handling dynamite. "When up in Alaska," he writes, "I saw something which illustrates the degree of indifference resulting in such cases. I saw a fellow sitting on a keg of dynamite, and with his right hand he struck a match on that keg of dynamite with which he lighted the pipe held in his left hand. Fortunately nothing happened—if it had, his body would have been blown into pieces as small as the particles in a fog, and I would not be writing this letter to you."

Now, not even a doctor would think of handing out sticks of dynamite for the unskilled to keep around the house. Why, oh why, then, should he advise or prescribe for general use such a dangerous thing as bichloride tablets? Whatever the purpose for which it is intended there are safer drugs which are equally efficacious, and it cannot be denied that there are many proper uses for antiseptics in the household. The ordinary cuts, bruises, abrasions, burns, and minor infections, in which the condition is too mild to demand a doctor's care, are almost universally treated at home. Antiseptics are also used in gargles for sore throat and for vaginal cleanliness in leucorrhea. Almost every man who goes hunting or fishing carries along a supply. If the people must use these things why not teach them to use remedies that are safe. For instance, hydrogen peroxide, boric acid, and proprietary antiseptics like listerine meet the ordinary indications, while such a remedy as chinosol, which is as powerful an antiseptic as bichloride of mercury and is more pleasant and more satisfactory in every way than that

perilous corrosive poison, can be carried or left about with perfect impunity and used absolutely without fear.

While we do not favor the constant appeals for more law, more law, in everything concerning the doctor, we do believe that he should be made to feel his personal responsibility in such matters. He should teach the people the danger of poisons of all kinds, and never administer or prescribe them—leaving them in the patient's hands—except in case of dire necessity. When bichloride of mercury really should be used—and of course it has a distinct place of its own—we would strongly advise the selection of the coffin-shaped and corrugated bottles now on the market; should these fall into the layman's hands the danger of accidental poisoning will be greatly reduced.—ED.]

ANESTHESIA NUMBER OF THE ANNALS OF SURGERY

Any physician who is especially interested in anesthesia should secure a copy of the December number of *The Annals of Surgery*. Not only is it about double its ordinary size, but it is also devoted almost entirely to this subject. Papers are contributed by Gwathmey, Connell, Parson, Cunningham, Cotton, Bainbridge, McMeechan and others.

LOBAR PNEUMONIA: SEVENTY-FIVE CASES

So much has been written upon this subject, and so much of it has been said over and over again, that I will be brief and, I trust, practical in what I shall present. I shall omit altogether the discussion of pathology and special symptoms, confining myself to the consideration of average cases as seen by a general practitioner in a country practice. Of new things I have little to offer, but I shall write some things that I have never seen in print, either in textbook or journal.

In this section, central Kentucky, most cases of pneumonia occur in the late fall and early winter months and in the early spring. Always when there has been forty-eight hours or more of cool wet weather, at these periods of the year, there will be more or less pneumonia. This atmospheric condition lowers the resistance of the human organism to the pneumococcus, which, being present in the respiratory tracts of a large percentage of healthy persons, is ready to take advantage of this systemic depression.

Under these circumstances, people fall ill, with aching backs, chill, high temperature of sudden onset, headache, and pain referred, in adults, usually to the region of the nipple of the affected side, and, in children, to the costal margin, though frequently they also refer the pain to the mammary region or to some other point in the chest.

I have seen a case of pneumonia in the lower lobe of a child's right lung diagnosed as appendicitis. In this case, there was board-like rigidity of the muscles of the right side of the abdomen.

At the onset, there frequently is vomiting, followed in a short time by some epigastric tenderness and more or less distention of the intestines. Constipation is the rule. I have not seen diarrhea in a single case.

The respiration rate may be anywhere from twenty-four to sixty in adults and thirty to seventy-two in children; expiration accompanied by an audible grunt, as a rule. The pulse rate usually is out of proportion to the temperature or respiration and may vary markedly in either direction.

The first indication that the physician usually wishes to meet is the severe and exhausting pain felt upon inspiration. There are many ways to do this: hot packs, cold packs, blisters, poultices, liniments, dry cupping, leeching, antiphlogistine, morphine hypodermatically, besides a host of others. But, best of all—safest and surest of all—is the *adhesive strip*.

Apply the adhesive bandage in the following manner: Suppose the disease is in the right lung, as it is most often in unilateral cases. Turn the patient upon the left side, and stand at his back. Strip naked the affected side, from waist line to arm-pit. Take a spool of zinc-oxide adhesive plaster, one inch wide, and begin barely to the left of the median line in the back and draw a strip tightly over the ribs one inch above the costal margin at the axillary line to a point one inch to the left of the median line in front. (This must be done on forced expiration for adults.) Pass the hand gently over the strip until it adheres firmly to the skin. Then cut off. Next apply another strip in exactly the same manner three inches above the first one, again being careful to draw it tight on forced expiration. In bilateral cases, do not hesitate to strap both sides.

What does this adhesive strip accomplish? It prevents an inflamed mass of lung-tissue being alternately stretched to the limit of chest expansion and then compressed to the limit of chest contraction twenty-four to

sixty times per minute. It *relieves pain*, prevents extension of the disease, and hastens recovery.

The adhesive bandage is worth more than any other single measure that I have seen used in pneumonia. It meets the first, and greatest, requirement in the treatment of any inflammation, which is, "Put the part at rest." I have used it in seventy-five consecutive cases, and only three times have I found it necessary to give an opiate to relieve pain.

Now start medicinal treatment, beginning with calomel and podophyllin. To adults I usually give calomel, gr. 1-2; podophyllin, gr. 1-12; sodium bicarbonate, gr. 1-2; repeating this every hour until five such doses have been administered. Six to eight hours after the last one has been swallowed an active saline laxative is to be administered, preferably in hot water.

After the saline has moved the bowels freely, begin the administration of the combined sulphocarbolates, two standard tablets every two hours. These tablets are to be continued throughout the course of the disease, leaving them off only when giving purgatives or laxatives, but beginning again after free bowel movement. By means of these drugs the abdomen must be made as nearly flat as possible, and kept so.

In the treatment of the pneumonic condition proper three drugs, aconitine, digitalin, and strychnine, stand preeminently above all others—and the greatest of these is aconitine. Digitalin is next in usefulness. With the first dose of calomel and podophyllin, give a granule of aconitine, and, if either sound of the heart is dull, give a granule of digitalin also. Give both together or singly, as indicated, but always "to effect." By "effect" I mean reduction of the temperature to 100° or 99.5° F. Then substitute the dosimetric trinity (aconitine, digitalin, and strychnine arsenate) for the aconitine, or for the aconitine and digitalin, if you happen to be giving both together when the temperature falls to the desired point. With the dosimetric trinity the temperature can be held at this point until the disease has spent itself.

The standard granules of aconitine may be safely given, with or without digitalin, as indicated, fifteen minutes apart, to effect or until the patient complains of tingling of the tongue or lips. Then increase the interval to thirty minutes and continue until the tongue or lips tingle again or the temperature has reached the desired point. Then give the Posimetric-trinity granule every hour until the temperature is normal, and thereafter every two hours for twelve hours more. The administration of these drugs is not interrupted by the simultaneous administration of purgatives, laxatives or intestinal antiseptics.

When the temperature has been normal twenty-four hours, remove the upper adhesive strip. Twenty-four hours later remove the others.

The diet in pneumonia is the same as in typhoid fever.

Patients must be kept in bed, without pillows, throughout the disease, and they should not be allowed to sit upright earlier than seventy-two hours after all fever has subsided. Convalescence requires the same management as in most other febrile diseases. Tonics, such as the hypophosphites, triple arsenites, glycerophosphates, and the like are indicated.

With the above treatment and management, the average duration of pneumonia is cut in half, and termination by crisis is practically unknown.

ALSON BAKER.

Dreyfus, Ky.

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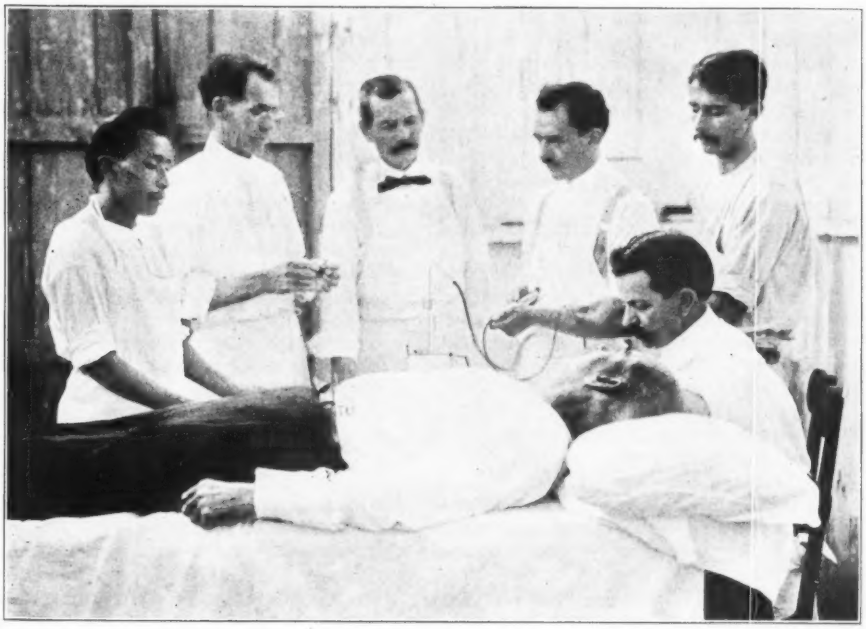
[When Dr. Baker submitted his article for publication, he wrote us that it gave his "experience in treating seventy-five cases of the disease, without a death." We wrote him at once, and asked that we might state that fact, since it certainly added weight to the methods he was employing. In his reply, a week later, he answered: "Yes, you are at liberty to quote from my letter, but you may make the number of cases treated as outlined seventy-six, instead of seventy-five, without a death. When I finished the article I had under treatment a patient suffering from pneumonia, a 13-year-old boy, both his lungs being involved. He has now recovered."

Now, it would be foolish for us to claim that every case of pneumonia can be cured; but, really, when men like Doctor Baker report results like these—and many are getting results almost as good—are they not worth considering carefully—worthy of investigation? We think so.—ED.]

MALARIA TREATED WITH SALVARSAN IN HONDURAS. YELLOW-FEVER EXPERIENCE

Through the kindness of Dr. S. M. Waller, chief surgeon of the Hospital del Norde de Honduras, I paid this institution a visit and witnessed an intravenous injection of arsenobenzol for immunizing a patient against



INJECTING SALVARSAN IN PERNICIOUS MALARIA
Standing, right to left: A native; Dr. I. Jones; Dr. T. H. Standlee; a native physician; an attendant. Dr. S. M. Waller sitting

malaria. (I enclose a photograph.) The results are remarkable. This man walked to the hospital and returned with us and continued his work of laying concrete floors.

The arsenical solution is thrown directly into the vein, care being taken not to get any on the outside, in which case it becomes very painful. This remedy is used in chronic malaria, with the best results and with no other remedial agents.

This hospital is rarely free from cases of malarial hematuria. One patient, whom I saw, came from Tela, on the coast, and the case was a very severe one. They never let one of these patients die if he reaches the hospital in a reasonable time after the onset of the attack. The method of treatment employed has become almost specific, and is as follows:

Administer 30 grains of sodium hyposulphite and repeat this dose every two hours until the urine clears up. Then use four Warburg's pills (without aloes) every two hours for one to two days. When urine is clear, also give 1-3 grain of emetine hydrochloride, twice a day for two days, by hypodermic injection. Use no quinine whatever. "If we do, we kill our patients," Doctor Waller says.

Malaria is somewhat different here from the malaria in the southern states. It is more intense. The infection is at first manifested by malaise and drowsiness; the patient wants to sleep all the time. The natives have learned to take large doses of quinine sulphate when this feeling comes on. When a physician is consulted after the onset of fever, quinine is employed hypodermically in large doses—sometimes 60 grains in thirty-six hours.

At this writing I know of no place in the tropics that is infected with yellow-fever, and an extensive outbreak anywhere in tropical Central America is not anticipated, because they have been "burned" with it until they are ever mindful of its approach. But it may break out again even in the United States, and some observations concerning the Honduras epidemic of 1905–06 are very worthy of note.

Dr. S. M. Waller came to San Pedro Sula from Alabama, and has been a resident of this city ever since. The yellow-fever started at Puerto Cortez and almost immediately appeared in San Pedro, a city of 7000 population. A *bando* was read here one afternoon, that twenty-four hours would be given for all to leave who desired, after which the rest

must remain. I will now let Doctor Waller finish the story:

"I chose to remain—I was young and had very little money. We had the yellow-fever to a finish. Before the mosquitoes were all killed there were 2500 cases, with 800 deaths. I had the disease myself, and they had made my coffin. On the fifth day a neighbor came into my room and said a friend of mine had died and needed my coffin. He got the coffin. *Muchas gracias!*

"I do not desire to enter into the history, etiology, and prophylaxis of this disease, be cause it would be a waste of space; still, a few of my observations during that siege, and which have never been printed, may do somebody some good.

"The most important thing about the management of yellow-fever is its early diagnosis and its early treatment. Today, if I were to see a person 'fall' in New York City, I think I could diagnose the attack immediately, even if it were the only case in the world. I rely mainly on the odor, and a 'smell' is hard to describe. It is more than anything like the odor given off by the native Honduranean cedar while in bloom. Still, you have none of that with you just now to smell of. It is very pungent and seems to burn your bronchi. This odor comes from the perspiration and breath. Patients usually 'fall' in the afternoon, after 4 o'clock, with a slight chill and a temperature running up to 104° to 105° F.; but, strange to say, the pulse is invariably 120 per minute when the patient first 'falls,' and never over that, regardless of temperature. The eye is a peculiar bright-red, while the patient watches your every move. The tongue is bright-red on tip and edges, with a light coating in the middle. Headache, backache, and restlessness also are present.

"Almost anybody can diagnose yellow-fever when the patient is about ready to die; but now I am going to tell you why an early diagnosis is so important. If you don't get the fever down to 100° or 100.5° F. during the first twenty-four hours, the patient probably will die. If the fever remains at 104° F. for the first twenty-four hours, he certainly will die on the fourth day, with a subnormal temperature and the other well-known symptoms. After death the temperature often rises to 100 degrees, and a yellow 'veil' starts at the head and rapidly spreads downward. The chest, to about the fifth rib, is as yellow as a bright orange and in a crescent shape like a short bib.

"I cured 95 percent of my cases after losing the first few and learning how to treat the malady. This was my treatment. First, I order 1 dram sodium bicarbonate and 6 drams of epsom salt, mixed and divided into three powders. One of these is administered every hour, dissolved in hot water.

"About the fourth hour, I give at one dose a mixture of 4 drams olive oil and 6 drams castor oil. As soon as free catharsis is produced give three or four hot enemas, about two hours apart.

"Begin as soon as possible with strong and reliable diuretics, such as spirit of nitrous ether, potassium acetate or potassium citrate. In conjunction with this internal treatment, I order hot mustard foot-baths every two to three hours, and hot vinegar fomentations. Everything used internally or externally must be hot, to assist in producing perspiration. Do not give anything cold.

"The patient's appetite is absolutely voracious and uncontrollable; but, if he eats, he will surely die. About the fifth day I give milk and water, equal parts, one teaspoonful every hour.

"Remember! Do what you can between 'the fall' and the same time the next day!"

This is Doctor Waller's experience with yellow-fever.

T. H. STANDLEE.

San Pedro Sula, Honduras, C. A.

THE INJURED FINGER

We have just received from Dr. J. MacDonald, Jr., of *The American Journal of Surgery*, a large photogravure called "The Injured Finger." This represents a doctor dressing the finger of a little boy from the street, whose face shows a good deal of distress. Two other little boys look on with interest and sympathy.

This is one of the most human pictures illustrating the doctor and his work that we have seen. It is just the thing to have nicely framed and hung in your office. If you are interested, write to *The American Journal of Surgery*, New York City.

THE BUSINESS SIDE OF THE PHYSICIAN'S LIFE

I wish to make a few casual remarks commendatory of your series of articles on the business side of a physician's life.

For years I have thought much on this subject. I have wondered that so little practical attention has been given to it by our

leaders and teachers in the profession, and have marveled with astonishment at the systematized ignoring of a subject that was of such vital importance to the success, not only of individual members of the profession, but also of the profession itself.

How can a physician or surgeon make a pronounced success without the materials with which to do it? How can he provide the ample equipment necessary for present-day practice? How can he acquire the post-graduate instruction necessary from time to time in any progressive man's life without an enabling income? How can he travel, and witness the methods and work of other physicians and surgeons, without being in a sufficiently independent position to permit of the necessary expenditure of time and money?

It is one of the absurdities of medical tradition to think that he can do so; to think that he can be able and progressive and at the same time ignore the business aspects of his life.

So far as I know, medical colleges and universities have from time immemorial taught their students about medicine and surgery; but they have studiously avoided instruction along these lines.

We of the profession spend much time and money every year attending various society meetings and teaching each other all we know about the treatment of disease but never teaching each other anything about this vital question. We pursue this anomalous and absurd position to the ultimate. As a profession we stand almost a laughing stock in the estimation of the public in this respect. They think us childish in that light, and justly so.

A lay friend of mine takes great delight in relating, on all opportune occasions, the following anecdote at my expense:

On a dark and rainy night a tired physician was laboring over his books. His doorbell rang and a stranger entered.

"Doc, what do you charge for making a call?"

"Two dollars," quoth the amiable doctor.

"Well, have you a vehicle in which you can make the call?"

"Yes," said the doctor.

"All right," returned the stranger, "I'll go along with you."

The doctor closed his books and his desk, went out into the barn and got together his horse and buggy, gathered in the stranger, and started for the call under his guidance. Arriving at the destination the latter got out of the buggy, handed the doctor a two-dollar bill and said "Good night."

"Well, how about the call; don't you want me to see some sick person?"

"Not at all," said the stranger. "A hackman wanted to charge me five dollars for this trip and I thought you would do it for less. Thank you very much. Good night."

The moral of this is: If we as a profession persist in placing ourselves in so lowly a position with regard to money matters, we get the same estimate placed on us by the public. I sympathize with the public's position, not with that of the profession.

BRANSFORD LEWIS.

St. Louis, Mo.

[That doctor was lucky—he got the money! Ordinarily he would have had to put the charge on his books, and if he was fortunate he might get his pay in six months or a year. However, he might never get it. It is safe to say that after the grocer, the butcher, the harness maker, the milliner, and other tradesmen had all been paid there would not be very much left for him. Of course the others would all receive their pay first.

As Doctor Lewis so forcibly points out the doctor's ideas of business are generally "rotten"—no other word seems quite strong enough. CLINICAL MEDICINE purposes to do everything within its power to make them better. We shall keep on advocating the betterment of the doctor himself, the betterment of his methods, and try to help him to make more money. That is one of the big tasks we have set for ourselves for this year; and, we need all the help that everyone of you can give us.—ED.]

WOMAN PHYSICIAN WANTED

A woman physician is wanted for the Presbyterian Hospital and Dispensary at Tsinanfu, North China. This is a city of about 100,000 people, situated 300 miles south of Peking. The staff of the Presbyterian Mission stationed at Tsinanfu includes nearly a score of American men and women, who are engaged in medical, educational, and evangelistic work.

The province in which Tsinanfu is located is very densely populated. In the 55,970 square miles which it contains, there are over 38,000,000 people. To care for the religious and medical interests of this vast population, there are only 250 missionaries of all denominations. The opportunity is a great one. The physician taking this position will work

at the Boyd Hospital for Women, which was opened in 1899 and now cares for more than 9000 patients yearly.

Anyone interested should address Wilbert B. Smith, Candidate Secretary, Student Volunteer Movement for Foreign Missions, 600 Lexington Avenue, New York City.

ELECAMPANE FOR COUGHS IN HORSES

I note what the article quoted from *The Eclectic Medical Journal* has to say about the efficacy and virtues of elecampane, or inula helenium, in winter coughs. The writer takes this occasion to state what may, perhaps, be of interest to some of your readers who still use horses in making their professional calls, that he has found elecampane an invaluable remedy for troublesome coughs in horses, occasioned by colds. My method has been to mix an ounce of the root (green when available) chopped finely and mixed with oats or mixed feed, given once daily.

GEO. D. STANTON.

Stonington, Conn.

[We don't know much about horses, but we do know that elecampane, or its camphoraceous active principle, helenin, is a valuable remedy in the lingering coughs following severe colds or grip. The indications for the remedy, according to the American Dispensatory, are "cough of a teasing, persistent character accompanied with substernal pain and profuse secretion."—ED.]

THE CARE OF THE DOCTOR'S HORSE

The following suggestions are intended for physicians in whose communities there are no qualified veterinarians, and the advice given is of a rather general character. It is not intended to be and does not attempt to give specific detailed help. My only aim is to present a few items of practical service to the many country doctors who read CLINICAL MEDICINE.

If your horse is rather thin, its coat rough, and it is not doing well, one of several things may be the cause of the trouble. For instance, it may be owing to unsuitable or a lack of suitable food. The best diet for the animal used for driving is whole oats and bright timothy hay. Another cause of this trouble is insufficient exercise. Keep the animal in a roomy box stall with a low manger; this is the best place for the doctor's horse.

Another cause for poor condition is bad teeth. They need not necessarily be carious; look out for "enamel points." These are sharp projections found on the outside corners of the upper molars and the inside corners of the lower molars. The upper points wound the cheek, while the lower ones lacerate the tongue. Naturally, this trouble interferes with proper mastication and digestion. The horse's teeth should be examined once a year—and remember that young horses, those from four to seven years old, are just as likely to have this trouble as the more venerable equines.

If the teeth are in good condition and the horse is fed regularly, it should suffer very little from gastrointestinal trouble. However, an occasional feed with bran is beneficial and a little ferrous sulphate and calcium phosphate given occasionally to a young, growing animal will aid nutrition decidedly.

The tonic most easily administered to a horse is Fowler's solution. Not only does this act in the manner of a general "condition powder," but it is also a vermifuge and serves to expel the large round worms. Give it in teaspoonful doses with the feed twice a day, for several weeks.

After a long, hard drive, always rub your horse vigorously over the extremities and then blanket it up. Not only is this a good stimulant to the beast, but is an excellent tonic for the man. If the horse persists in shivering, showing symptoms of incipient pneumonia, remember that 4 ounces of spirit of camphor and 1 ounce of aromatic spirit of ammonia mixed with a dozen well-beaten raw eggs (given as a drench) often will abort the attack.

If your horse has colic (a rather broad term), give it 1 to 3 grains of morphine, or about eight tablets of H-M-C No. 1 (human dose). This should be dissolved in several cubic centimeters of water and administered by injecting under the skin of the neck just underneath the mane. A little tincture of iodine applied over the point of injection will often prevent abscess formation.

The morphine combination quiets the animal, so that other remedies may then be given. For instance, 2 ounces of oil of turpentine, 1 ounce of sulphuric ether, and 1-2 ounce of oil of eucalyptus, mixed with a pint of linseed-oil. This relieves the tympanites, while a warm soap-suds enema containing a handful of salt unloads the lower bowel.

A good remedy for spasm of the bladder and muscles of the neck and urethra is 1 or 2 ounces spirit of nitrous ether.

"Scratches," or "grease-heel," is a very troublesome disorder in the winter. Care-

fully clip off all the hair over the area and wash with luke-warm water containing castile soap and a teaspoonful of carbolic acid to the quart. Dry thoroughly, then apply balsam of Peru. Cover with absorbent cotton and bandage. Keep this bandage on for three or four days, and later apply zinc-oxide ointment or olive-oil.

For sore or sprained tendons, use a hot saturated solution of magnesium sulphate with carbolic acid (a teaspoonful to a gallon), applied as a pack. Later, rub in soap liniment or tincture of iodine.

If these suggestions are of value to physicians who are far away from the buzz of automobiles and who must rely upon their faithful horse or team in their daily routine, the purpose of this article will have been fulfilled.

E. T. BAKER.

Moscow, Ida.

[Doctor Baker, who is assistant state veterinarian of Idaho, has given us some valuable points, which will be appreciated by many a country doctor. We hope he will "come across" with more.—ED.]

SPECTRAL NIGHTMARE DREAMS IN THE LAND OF THE AZTECS

Fourteen months have passed into the storehouse of eternity since photographs were taken for the January, 1913, number of CLINICAL MEDICINE, ushering me along deeper into the fifth score of this graphic pilgrimage, still with healthful vigor in aggressive activity. This fraternal reminder calls up anew the precious value of guarding the sterling treasure nature lent you all, that would multiply your octogenarian practitioners surprisingly, even from among some of those who fall by the wayside ere half that measure has been attained.

But, alas! the foibles and follies of the vainglorious potency of your imperious resources are hastening your country along the perilous trend of Destiny, that will absorb your superfluity of doctors and demand increasing supplies in the havoc of war with Japan, and Mexico and other Latin-American peoples.

Such shambles of martial slaughter are in active preparation, inevitable as the relentless march of evolution. The people of Japan are drunk with the vanity of sanguinous achievements, while Mexico is seething with a consuming thirst for vengeance, that vibrates a sympathetic chord to the remote hamlets of Central and South America.

Those Japs dream of conquest of territory for their swarms that must quit their overcrowded hive, their flimsy subterfuges for war notwithstanding. The once fairly smooth cicatrices of the wounds of Mexico, inflicted by the American conquest of 1847, have been torn off by the violent inflammatory declamations that have characterized the three past dark and bloody years; and those wounds now bleed afresh and rankle anew with acute torture; while unmerited favoritism sold or lent Mexican rebels in the United States—although individual contravention to the policy of the government, which is regarded covertly culpable—is another goading thorn of resentment.

Ere all such disquieting tirades were launched amid a feverish populace, tensely strung by the dubious menace of revolution, the average young Mexican, save some students, knew little and cared less about what was deemed dead history. The often unreasonable concessions granted American enterprises provoked little criticism, the great majority of the people bidding enthusiastic welcome to foreign capital that was vibrating the whole country with prosperity. Now the enormous sums that must be paid, soon or late, for war damage to foreign investments and their owners or agents augment the poignant hate cherished by all classes for the Yankees.

It is painful to present you all the deplorable truth unmasked. The rude severance of amicable relations between your people and those of Mexico is a universal calamity, beyond any rational measure of computation. Yet, it were futile to dream of unattainable peace.

The die is cast and the seal set on the implacable attitude of the Mexican people—a lesson persistently taught and tirelessly conned—the inexorable ghost of American intervention daily and nightly parading a lugubrious procession before the elastic imagination of these hapless people; while the alarmful vociferation of press and declaimers reverberates the tocsin, "The Yankees come to take from you the remnant of your birthright they left you when plundering you sixty-seven years ago!"

The preponderance of intellectual thoughtfulness hold no modicum of doubt of such termination of an unsuccessful death-grapple with rapacious invaders, coming under the specious pretext of protecting their imperiled countrymen—an enterprise alien to native peace and common weal, nowise analogous to the American intervention in Cuba.

And this raw-boned and bloody ghost of American intervention, for the existence of which the American people and press are measurably responsible, has caused American residents to suffer more damage than the armed factions have inflicted, due to panicky flight from this country, while not seldom without the actual provocation to justify such precipitate abandonment of interests.

Unless perverted and damnably falsified by Mexican editors, the press dispatches—published as a manifesto of an American colony (on board a warship at San Diego, California) that were forcibly deported from the Yaqui Valley, in Sonora, by American officers—denying that there had been any damage done its members, by federals or rebels, and no fears entertained of such overt acts, eloquently negative the urgent necessity of much of the American exodus from Mexico, where moderate discretion might have averted all danger.

However, American residents and interests were almost as a unit hostile, tacitly at least, to every revolution that has been prosecuted; certainly a grave provocation to rebels, when such sentiment was carelessly guarded or openly expressed. The average American is not an overdocile specimen under aggravating circumstances, such as when being defenselessly confronted by armed jailbirds and ignorant peons—the great body of private rebels. Then, often, the glib tongue blurts out some uncomplimentary criticism, which under the influence of intoxication the hearers resent later in the drama.

A very large contingent of Sonora rebels is composed of savage and semisavage Yaqui Indians; a circumstance that should have intensified the peril of American residents in that belt, but which failed to materialize, if the San Diego news is correct.

Too much stress is put on the practical outcome of the pending election,* as a pacifying factor. Here, for example, is the most moderate belt of the Republic, the great majority of the public would have immolated Felix Diaz and Gen. Victoriano Huerta immediately after the Madero tragedy; yet, now the same people will vote for Huerta for president. This is due to the inflexible attitude of Huerta in the strained relations with the United States. Intellectual Mexico wants a man who will yield absolutely nothing, save when the last ditch has been carried; and Huerta is regarded as the only available man equal for such requirement.

The Catholic is the predominating party politically; yet, it will be swept off its footing by anti-American influence; and Huerta will be elected, in all probability, as the military vote will be polled for him beyond peradventure. Most of the Catholic contingent here will be polled for Huerta, on his brief record as chief magistrate and unquestioned military qualifications, Gamboa not being a military man.

However, even hotheaded Mexico dreams not of launching hostilities with Uncle Sam, save in defensive combat, should he invade this country, or in alliance with Japan, the Latin Americas, and whomsoever else may embark in the intrepid enterprise. The Japs constitute the popular Mexican fad, even though Japan may have hinted at no hostile arrangement with Mexico.

The nonrecognition of Huerta by the United States and the facility with which rebels have secured arms and ammunition from American sources have embittered even pacifically neutral Mexicans of material property against the American manipulation of the controversy. Had Huerta been recognized without vacillation, the revolution would have terminated in short order; and American sentiment domiciled here was almost a unit in favor of such recognition, as the short and sure alternative to protect life and property of Americans exposed to the peril of lawless warfare.

Under such circumstances, we cannot pause to scruple about hands reeking with blood unlawfully shed; for human life has been amply cheap under the broad canopy of military necessity and public safety, not counting vengeance and retaliation, so elaborately in evidence, even in remotely sequestered hamlets hereabouts. The slaughter of Mexicans out of hostile combat would sum an appalling total were accurate figures obtainable.

Mexico has an army of more than 100,000 well-trained and effectively disciplined men, inured to the trying hardships, privations, and exposures inseparable from arduously active campaigning. There are 2000 of them in this sickly belt, wading marshes and lagoons, and climbing mountains covered with jungles impassable without the aid of the machete, and, without tent, oilcloth or cooking-utensil, in the downpour of drenching rain that rarely falls less than four to ten hours in the twenty-four, sleeping on the bare wet ground through it all.

Such are the conditions and the foemen American troops would encounter in the districts of Mexico that the native armies would

*This was written in October.—Editor

select for the most part, regions where relentless nature would be an unsparing ally, before which invading hosts would be decimated, with bugle note and hissing ball unheard. There are long stretches of country in which the water of each day's march would prove more deadly than the ambuscades of a legion of a hostile army. The lovely healthful route from Vera Cruz to Mexico City, replete with crystal fountains and leaping cascades of sparkling water, over which the American army passed, obtains nowhere else in Mexico where military operations would be prosecuted. The same walkover to aggrandizing victory as that of yore will nevermore be repeated. Mexico learned a defensive lesson in that hapless conflict.

The Mexicans, singlehanded, dream not of final victory over the United States, and would not thus go to war save in self-defense. Yet, they would strive to be vanquished at a mournful price to invaders; and such war of invasion would cost the United States what the civil war entailed in men and treasure.

It were far better that the United States abandon all Utopian idea of a liberal republican government of the Mexican populace. As I have affirmed several times before, in the pages of medical journals, nothing less stern and pressing than the government that was established and maintained by General Diaz will assure peace, order, and prosperity in Mexico; and even that government was every whit as good as that of the United States. I lived under the Diaz régime every day of its existence.

The admirable conduct of federal troops, committing no depredation and paying merchant and ranchman alike for whatever asked, as well as their intrepid courage against overwhelming numbers of rebels, have powerfully contributed to make them appear, in this section, the champions of law and order, as well as to raise General Huerta high in popular estimation. Rebels and their belongings met less respect, under treatment you may deem barbarous—yet the lessons were those taught by civilized General Sheridan in the Valley of Virginia and of General Sherman in Georgia, and adopted by the federal troops of Mexico as models.

Seven hundred rebels lately attacked a lieutenant and 30 men in the town of Cardenas, not far from here, the latter defending themselves from the upper story of the brick town-hall. After three days of combat, 19 men remained with their wounded lieutenant, refusing to surrender, when 250 relief reenforcement appeared from three sides. In ten minutes there were 150 dead, 135 wounded, and many rebels prisoners.

A few days later a federal lieutenant and 15 men were guarding 25 prisoners on a little river steamer. Learning, at a landing, that a body of 150 rebels was marching through a banana plantation near by, he left three men with the prisoners and took position, from where he poured such a withering fire that the rebels fled, to take refuge in buildings of the Alvarado plantation; but were so hotly pursued, they plunged into a lagoon where a current that the best swimmer could not stem swept along. Of this party, 48 dead from gunshots remained behind; the rest were completely annihilated in the water. None of the federals had sustained even the slightest wound.

Reasonable auspices indicate that we shall see no more besieging nor even raiding parties of rebels in this long-infested region, as the marauding industry has lost most of its attractiveness as well as erstwhile sympathizers. Most of the peons who lived through the crisis have returned to the places they abandoned on the plantations to earn homesteads fighting landowners.

I am the only doctor who faced the music from first to last, even my friend, Doctor Maldenado, having retired to a large city, after the bloody combat to which he and his family were exposed—a very prudent move. All the others left much earlier. There is now one federal surgeon in the district.

There has been much inconvenience and suffering in the numerous families who took refuge in the mountains to escape the power of rebels; and expense and loss to those able to go to the garrisoned towns for protection.

Now, American brothers, I have made you a crudely imperfect diagnosis of a complicated malady. I implore you to lend all possible helpfulness to mitigate, should the impossibility of cure supervene.

ROBERT GRAY.

Pichucalco, Chiapas, Mexico.

A CASE OF DYSENTERY

Allow me to report briefly a case of dysentery treated with emetine hydrochloride.

Initial attack, June 1, 1913. No pathological examination. Characteric diarrhea continued, notwithstanding exhaustive treatment with the usual remedies. Patient applied to me for treatment October 1.

I gave emetine hydrochloride, two doses, 1-64 of grain each, every two hours regularly. First effect was increased action of the bowels,

nausea, and profuse sweating. On the second day of treatment, I irrigated the lower bowel with solution of quinine, 7 1-2 grains to the pint of water, after which I injected 2 ounces of liquid plain petrolatum through a large catheter. The bowel movements stopped at once after the injection of the petrolatum. Little nausea after that. The sweating continued throughout the administration. Diet: buttermilk, brown bread, liquid peptonoids and an equal amount of elixir of lactated pepsin. Ten days after beginning treatment the patient was discharged cured.

I have no doubt whatever of the specific effect of ipecac in the treatment of dysentery in the epidemic form, for I have had similar results from powdered ipecac. But emetine is far more potent, scientific and easily administered.

From my experience, I should say that, aside from adjusting the diet and exercise of the patient, other treatment than emetine sufficiently and persistently administered is unnecessary.

D. B. JACKSON.

Greer, S. C.

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[Good, but usually the emetine hydrochloride should be given in larger doses (1-2 to 1 grain daily), and hypodermatically in severe cases. But Dr. Jackson's brilliant result shows what can be accomplished, even with moderately small dosage.—ED.]

"HOUSEWORK AND SUFFRAGE"

The writer of the editorial upon "Housework and Suffrage" in your issue for November, 1913, raises a question too frequently looked at through imperfect lenses, or from a standpoint providing limited vision. To focus properly upon any material object two eyes are necessary; for a correct view of humanitarian concerns both the masculine and feminine viewpoint must be considered, and usually the feminine is overlooked.

That divine discontent which is the cause of the feminist movement today has a very real reason for its existence, and one not fully realized by either men or women. I believe it to be divine, because to my mind it precedes the next step in the evolution of the race, viz: the recognition of individual self-control, the introduction to a real democracy, individual self-government. Not the least among the causes of this discontent is the economic dependence of the housekeeper.

If what you say is true as to the value of home industry, why is it that it is not respected? I reply because *men* degrade it. To encourage women to undertake it, fulsome eulogy is pronounced; but in the actual fact it is classed officially by them as unworthy of recognition. The United States Census classes such workers as having no occupation. Few are the men in the homes who have any idea that the homekeepers are entitled to more than board and clothes. They think (judging by the laws they make, which laws are the basis for action regarding the final disposition of joint property) they are generous when by will one-third of joint accumulations is given to the wife, when by right one-half is hers as a result of labor and sacrifice on her part.

Not only is this true, but in all except thirteen states in this country a mother has no claim to her child; cannot be its guardian except by special order of the court, presided over by a *man;* in some states has been declared by the courts not to be next of kin to her own child. Though working hard from, not sun to sun, but hours before and after the sun rises and sets, at a variety of occupations, each one of which constitutes a separate business or profession when taken out of the home, she has no financial return whatsoever; is treated as a perpetual minor.

In an interview with Judge Pinckney, of the Juvenile Court of Chicago, some time ago, he told me he had solved the problem for the boy, but not for the girl. He said this was to place the boy with a farmer who would give the boy something for his very own; he instanced one case of a boy who thus owned a calf, who could not be persuaded to leave it to return to the city. And I wondered whether this same sense of ownership might not be just as effective with girls. I would like to see it tried.

I listened recently to the state superintendent of schools in one of our states. He was talking on industrial education; claimed it was necessary for boys; boys needed to find themselves; girls did not. Why not? Simply because masculine ideas find for girls only one occupation eventually, and that one which brings no financial returns.

The women's Messiah will be that one who will teach men their duty to women. It will take no great persuasion to direct the energies of women to homemaking when men (not women) properly estimate its value in a substantial way. The majority of women love their homes; prefer to care for home and loved ones to anything the world could offer in exchange for its shelter; love to adorn it; to make it attractive and cheerful. Financial

independence is the only magnet to draw them aside from it. Under existing conditions, however, it is surprising to note how very small comparatively the number who fail to follow homekeeping as an occupation. If in the future it is exalted to a profession of sufficient importance to be recognized by men as worthy of financial return, it will not be necessary for legislation to require proper preparation for home duties. Women and girls will prefer this to any other occupation; the work will be less wearisome; it will not be spoken of with contempt; domestic service will be ennobled and discontent will cease.

They tell us marriage is a partnership, each partner having certain duties well defined. It is not right that one of them should appropriate all financial benefits resulting from united effort. Woman's contribution to the state (citizens) is of more importance than is man's (money). It does not so appear. Her voice is silenced; her purse is empty. Her labor is unrewarded. To make her content, reward her for labor performed by dividing with her during life the result of the united work of the partners in home life.

This is the work for woman's Messiah to perform; this the way to make homekeeping both honorable and desirable.

F. H. RASTALL.

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[A fine statement of the women's side, with which we deeply sympathise, and for which we thank the writer, whose address was unfortunately missing from this paper.—ED.]

ESPERANTO: IS IT DEAD?

Not at all—nor in the least decrepit. I am frequently asked by some one, who has neither the energy nor the inclination to try to keep up with the march of human progress, what has become of Esperanto? Is anything being done about it?

While there has been no blast of trumpets announcing great events in the onward movement of a great army of Esperantists, there has been a steady and healthful growth throughout the civilized world, least of all in our own country. In America where one may travel for thousands of miles and hear nothing but English spoken, where the one great aim in life is to get money, it is not difficult to understand why the need of an international language is not more keenly felt.

To a wide-awake physician, whose profession extends over the entire world, to whom the labors of the eminent Japanese investigator, the German chemist, or the French surgeon are equally interesting and valuable with those of his own country, it should be entirely otherwise. To us, anything that will make more accessible the results of foreign as well as domestic research should be of the greatest interest. If the reports of the discoveries and experience of the medical world were printed in one recognized world language the good resulting would be immeasurable. That this will ever be possible by means of any existing national language is simply out of the question. National prejudices and intrinsic difficulties of the national languages themselves make it impossible that one of them can ever be adopted for the purpose.

Esperanto by virtue of the nature of the language, is the only solution of the "confusion of tongues." The extreme ease with which it may be learned by natives of any country, the beauty and expressiveness of the language, together with its flexibility and at the same time exactness of expression, make it at once the most rational and practical language for international use. It is no longer an experiment, nor is it a Utopian dream. It is an established fact, a real, living, international language in daily use by thousands of educated people in all parts of the world. Many Esperantists have travleed in foreign lands with Esperanto as their only means of intercourse with the people of the countries through which they have passed.

Originated by one of our own profession, Dr. L. L. Zamenhof, we should, of all the world, be the ones to take pride in its use and adoption.

Last August occurred in Bern, Switzerland, the ninth annual international congress of the Esperantists of the world. Representatives of twenty-seven nationalities met and spent a week in the actual use of the language. Two plays were put on the stage and greatly enjoyed by those present. Services were held in the Hebrew, Catholic, and Protestant churches. Meetings of various international societies were held to discuss problems of world-wide interest. At this meeting peoples of radically different languages, customs, and religions met and fraternized as brothers. At this time occurred the meeting of the World Wide Medical Association. The next international congress will be held in Paris in August, 1914.

There has been organized a Universal Esperanto Association with representatives in "more than a thousand localities distributed

in some forty-four different countries. The object of the society is to facilitate and to develop international relations and also to create a firm bond of union between all of its members and its affiliated institutions. To this end it has created a series of services for the use of private persons, public bodies, and commercial firms, whose interests are, or are tending to become essentially international. During the year 1912, and after only a few months' existence, about 11,300 services of all kinds (of which 2,800 related to commerce) were rendered."

An official year-book is issued in January of each year. That for 1913 contained 290 pages. Representatives (or delegates as they are called) are elected or appointed in the principal localities through whom the services are rendered. Some medical literature has already been published in Esperanto and a medical journal is published monthly. Every physician who intends going abroad whether for study or pleasure should investigate Esperanto. Write to the delegate nearest to your home for information and get busy and learn the language. All inquiries addressed to the writer and accompanied by return postage will be cheerfully answered.

J. R. SCHOFIELD.

Fort Collins, Colo.

DR. SAJOUS MAKES A CORRECTION

In a recent letter Dr. C. E. de M. Sajous, writes us that in our comment upon his letter, published in the December number of CLINICAL MEDICINE, page 1026, we quoted him incorrectly in advising the use of physiologic salt solution intravenously three times a week. Dr. Sajous says that he cannot find where in the world he made such a statement, and if he did make it, it must have been through error, since he does not approve of intravenous salt solution in this disease.

We are glad to print this correction, although we *do* find in Dr. Sajous' great work on "Internal Secretions," page 1843, the recommendation to use salt solution intravenously in connection with adrenalin.

IODINE TO DEODORIZE STINKING FEET

Having read CLINICAL MEDICINE for several years and picked out many useful points, I have one to add that may be of interest to the "family."

Many times we note "a new use for iodine." I have used it in this manner many times. For four years my work was entirely railroad work and I met with many feet injuries and many of these feet had a most terrific odor—some feet don't have to be injured to acquire this odor!

First, I prescribed a good washing, then a liberal painting all around and between toes with tincture of iodine. One application will so change a man's feet that he will be hardly able to recognize them himself, and three or four applications, given once or twice a week, will usually eradicate the odor completely. The only bad effect is that sometimes a layer or so of skin departs with the odor.

ROBERT H. GRAY.

La Crosse, Wis.

IS IT LEPROSY?

I am sending you the photograph of a Mexican woman twenty-eight years of age. I was called to see her during a smallpox scare. My first examination was made at night by lamplight, so I thought her suffering from smallpox.

IS IT LEPROSY?

However, when the county health officer visited the woman with myself, the next morning, it was very plain that this was not variola, and we were also able to exclude syphilis and pellagra. The woman claims that she has had this eruption for one year. The hands and arms are in much the same

condition as the face, but the body is only slightly affected. She is very hoarse, but complains of no pain, the principal trouble being a slight itching. I am unable to secure any definite family history.

Can anyone tell me what is the nature of this disease? We are located on the Mexican border and called upon to attend many of the Mexican peons.

I. N. CAMPBELL.

Sabinal, Tex.

[We have written Dr. Campbell for further data, without which it is impossible to make a diagnosis, but the photograph suggests leprosy. We hope to be able to give more information next month.—ED.]

OUR LONDON LETTER

For a long time the safety of traveling in England has enjoyed a very enviable reputation, in comparison with that in the United States. Whenever a serious railway smash occurred in your country—and it has been no uncommon event—it was the fashion for the American newspapers to trot out the records of disaster for some time past and to compare them with those of the Board of Trade returns of Great Britain, greatly to the advantage of the latter. But of recent years there has been a progressive rise in the traveling casualties over here. We have had quite recently four fatal railway accidents, and increasing nervousness among railway travelers is evidenced, it is said, in the greater desire to avoid the first and last carriages in trains, and particularly in the greatly increased demand at the booking offices for insurance tickets—a precaution until recently associated only with the more timorous travelers.

The rise in street accidents, moreover, during the past decade has been so steep that at the end of 1912 a select committee of the House of Commons was appointed to inquire into the causes of the increasing number of street fatalities in the metropolis, and to suggest remedies. The committee was reappointed on March 14, 1913, to continue its investigations, and it has recently issued its report.

From this report we learn that the number of those killed in street accidents has risen progressively (with the single exception of a fall of 20 in 1909), from 155 in 1904, to 537 in 1912; in other words, such fatalities have more than tripled in number. The injured have, in like manner, risen in number, from 10,384 in 1904, to 20,166 in 1912. An undue proportion of these accidents is ascribed to the "motor-bus," and the reason for this is not far to seek. While the motor-bus possesses all the disadvantages (from the pedestrian's point of view) of increased speed and mere mechanical control, it can be maneuvered in and out among the traffic, so that its course cannot be counted upon; in which respect it differs from the tramway, which, being confined to its tracks, can be more easily avoided by pedestrians who chose to exercise caution.

The same reason may help to explain the parallel fact that 16 percent of the deaths are due to cyclists—particularly motor cyclists. Moreover, as the motor-bus speeds are greatest and their fares lowest on routes on which they compete with tramways, they greatly increase the danger of mechanically impelled vehicles by their power of darting in and out.

The principal point of the Committee consists in recommending the creation of a special government department which is to advise Parliament in all matters relating to London traffic, this department to be a branch of the Board of Trade. Among its duties will be, to consider tramway schemes; to have the confirming authority over county-council by-laws and regulations for licensing all mechanical stage-carriages and hackney-carriages, which are to be brought under closer control by regulation of routes, timetables, and the number of stage-carriages; the establishment of speed limits for motor-omnibuses and other heavy motor traffic; the provision of more stopping-places and refuges; and closer exercise of traffic by the police. Other recommendations are speed registers for tramcars and motor-omnibuses, the endorsing of all driving offences on the license, the standardizing of motor-horns, the prohibition of dazzling headlights in lighted streets, and the order that all slowly moving vehicles shall hug the curb.

The Insurance Act continues to occasion a great deal of trouble. In some districts, particularly in industrial centers, it no doubt is working more or less efficiently by insuring a sufficient pecuniary return to attract such doctors as cannot choose where they will live; but in very many others it is productive of little benefit, much individual hardship, and a great deal of heart-burning both among doctors and patients.

In London, on October 24, the official returns showed that the number of insured

persons in the county of London, on July 14, last, was 1,505,519, and that it had been practically stationary since. Yet, upwards of 400,000 of these had not taken the trouble to choose a doctor on the panel as their attendant; which has resulted in the accumulation of a considerable sum of money, approximating $700,000, set aside for their medical attendance and not earned by any panel-practitioners.

A dispute has arisen as to what shall be done with this fund. Some of the panel-doctors contend that it ought to be divided among the doctors on the panel pro rata to those on their lists, but eminent counsel have given their opinion that this would be illegal, and that authorities who thus distribute the surplus fund (as has been done in some country places, for nowhere have all the insured taken the trouble to select a doctor; largely because they prefer to pay fees to some doctor who has not gone on the panel) will be legally liable to make good the sums thus distributed.

The great stumbling block lies in a fact entirely overlooked by the framers of the Act, and that is, that the general practitioner has to live and pass the whole of his time in the surroundings in which his practice lies. Well-to-do districts form attractive residences, because of their social advantages. Mixed districts, such as villages and country towns, also are acceptable, because they have always a sufficiency of persons to form a congenial social circle for the doctor's wife and family.

But the purely industrial communities are such that no cultured man will live there for choice—or at least only such as are imbued with a missionary spirit, but which naturally is a small proportion of the whole—and, consequently, practice in such districts rarely is taken up except by those whose means or social connections are insufficient for a start in a more congenial neighborhood.

This has been the main reason why, while the socially preferable neighborhoods have always had one medical man for every 500 to 1200 inhabitants, most of the industrial districts have rarely had more than one to from 2500 to 6000. I know that my own feeling is shared by the majority of the doctors of my acquaintance, and that is, that I sooner would have a small practice where I should find congenial surroundings for my leisure than a large one where I could not find any such, even though I might earn five times as much.

The business man can enter such a district in the morning for his work and in the evening return home to his wife and family, where he can enjoy all the comforts of a cultured home and meet his equals in social converse. The poor doctor, even in private practice in such a place, must stay there night and day, exiled from the amenities of life and with very scant opportunities of getting away even for a brief change. When he becomes a semi-government official, as under the Insurance Act, under such conditions his position is simply slavery in exile.

The only thing that will alter this natural, and in the case of a family man proper aversion, lies in the apparently hopeless event of a redistribution of the population, by the breaking up of the huge slum districts created by modern industrialism. And therein lies a problem of even greater importance to national economics than to the Insurance Act.

An extremely unpleasant incident in connection with the Act has occurred at Wisbech. The medical profession there largely stood aloof from the panel, so the panel was closed and a Doctor Dimock was imported as a whole-time medical officer. It is alleged that he refused to allow anyone insurable to contract out, even the servants, grooms, and so on, of the medical men themselves. He was, in consequence, politely ostracized by his professional brethren in the plan. Then followed a series of most foul and libelous letters and postcards to many members of the profession, which resulted in a criminal prosecution being brought against Doctor Dimock. He committed suicide, and a great attempt was made to work up sympathy for him as a persecuted man. Serious riots ensued in Wisbech, the police having to be reinforced from neighboring places.

Of course, with Doctor Dimock's death, the prosecution falls through, but, in a letter to the press from the prosecuting doctor, the latter asserts that he has in his possession similar abusive and libelous letters sent by Doctor Dimock to other persons while he was a medical student. The most charitable interpretation would be that Doctor Dimock was mentally unbalanced; still, it is notorious that in many places medical undesirables have been imported where the established practitioners refused to serve. "K"

CRIME AND WAR: A COMMENT

The letter of Doctor Waugh and the correspondence of others, in CLINICAL MEDICINE, on the subject of the title and the impending climax in Mexico's turbulent condition impresses this subject upon every thoughtful mind.

Anyone interested in current events, as they transpire from day to day, and who has followed them through a half century of life, either by reading or observation, knows that the tramp, whose name at this time is legion, was born when the armies of the late war between the states was disbanded.

The tramp became such, because when he went to his old home he found his former place occupied by another and, so, went out into the world to be a vagabond, in order by begging, to get something to eat, for he could not earn the price by work. Eager hands had forestalled him while he was fighting for his country and theirs.

Doctor Waugh suggests that the young fellows are so full of red blood that it must have an outlet, else they will explode. Better let those sanguinary chaps expend their excess of volatility by wielding a hoe rather than by cutting the throats of others as good as they.

If war is inevitable and must come, I suppose it is every able man's duty to shoulder a gun and defend his country; and I have little regard for one who will not do this. But General Sherman has said that war is hell—and he knew, and so do the desolate homes and trampled fields where his army blighted its way, and so do the mourners of the North on Memorial Day as they wet with bitter tears the billowed earth where sleep their dead, now mingled with common clay.

I am not a Socialist, nor an Anarchist, nor an I. W. W., but I question the right of anyone calling me out to be shot at in a quarrel which I had no hand fn making! Still, I'd go, all the same, if my country were in trouble and needed me.

The prime purpose of any country should be the attainment of the best and highest civilization, because that condition profits happiness to its people—and happiness is the untimate essential of human aspirations.

Peace is the child of civilization; it promotes the arts and sciences and literature; it softens the amenities of individuals, and thereby secures mutual rights between each other.

Peace ennobles a country, cultivates the fields that harvest the best and highest impulses of mankind, and scatters broadcast their bounties in all the ways of life.

War is the natural attribute of the savage and thrives in no other estate. It disregards correlative obligations, derives power and continued existence through treachery, cruelty, the infliction of physical and mental suffering, and is the antithesis of civilization.

War degrades a country. This it does by denying the splendid and wholesome opportunities to which a land is entitled by the obvious rule of justice and fair play. It destroys the prime material of a country's fabric, which is men and women, and lays waste its cultivated fields. It tears down the works of art that incline the mind to feelings of pleasure and admiration and erects in their stead repulsive figures of death and decay.

War is a relic of barbarism. It elevates a false standard of good breeding and refinement. The gruesome presence of war emblazons the streets of a city with rags, and gaunt hunger, and general destitution. It paralyzes the hand of labor, invades the home with tears and sorrow, fosters crime, and blights the spirit of enterprise, progress, and prosperity.

The demon of war inspires to deeds of anarchy, rapine, and arson. It creates the pestilence that destroys what the sword rejects. Its pollution and bitterness remain when the baleful cloud has sheathed its fierce lightnings and the raped country lies prostrate and helpless.

The price of restoration is wasted energy, because the destruction is needless; society is demoralized, and rehabilitation well-nigh impossible.

War is murder. It strikes the babe in the cradle, the goodness and beauty of womanhood, the power of manhood, and the pitiful impotence of old age.

War impoverishes alike the victor and the vanquished. The kindliest emotions of reverence, mercy, and affection are crucified upon the relentless cross of ambition. Fraternal and filial love lie dead at the feet of suspicion. Along its cruel trail are smouldering homes, the ashes of an extinguished commerce, the visible phantoms of despair, and in all the land there is not a rainbow of hope, to promise a better morrow.

This is not an imaginary arraignment of war! The voice of tradition and the pages of history are eloquent with the story of its wrongs and all the ages offer not a syllable of extenuation.

I arraign the evil genius of war for turning back the dial of a country's golden days and pointing the drooping hands to the prospect of irretrievable ruin; for closing the schcolhouses and sowing the seeds of blind ignorance and futile destitution; and, last of all I arraign it in the name of countless scars on the escutcheons of Time whose every supplication it has disregarded and trampled (figuratively speaking) under foot.

AMASA S. CONDON.

Ogden, Utah.

Just Among Friends

IN MY work at Mudlavia, dealing, as I do, mostly with chronic diseases, I have become convinced that a great number of chronic ailments result from faulty elimination, over-eating, lack of exercise, too much tobacco and alcohol; in short, wrong living.

At Mudlavia, I have a large number of cases of rheumatism, gout, and allied diseases caused or aggravated by imperfect elimination of nitrogenized waste. A large series of the affections of advanced life find their origin in impaired elimination of nitrogenized waste. They are compensatory actions rather than diseases *per se*.

It is obvious that, in the treatment of affections originating in the imperfect elimination of nitrogenized waste, there are several points to be attended to; viz.: (1) To reduce the amount of nitrogen consumed. (2) To give large quantities of fluids and so wash away the sparingly soluble salts. (3) On no account to attempt to stop the compensatory excretory action before the normal excretion is restored. (4) To act upon the different compensating organs, setting up vicarious elimination through other channels. Warm baths, especially our mud-baths, are peculiarly beneficial. The drinking of large amounts of pure or alkaline water also is indicated.

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The pain of chronic rheumatism is not inflammatory pain; for there is no heat, redness, swelling, or constitutional disturbance. It is not neuralgia; for that pain is gusty with squalls and lulls, while rheumatism is a steady, unvarying pain. Is it periosteal? No, for then there is tenderness on pressure; and the pain is distinctly worse at night. Is it an osteal abscess? No doubt many an abscess in the cancellated structure of the ends of bones has been held to be rheumatism—till at length time showed that it was something else. Is movement limited in rheumatism? Commonly so; but not always.

Intestinal decomposition, with a gas-inflated colon, may produce a pain in the precordial region that may be wrongly diagnosed as "rheumatism." Pain in the shoulder may be due to a congested liver. Pain in the back may be due to muscular fatigue, diseased ovary or kidney, or an aneurysim eroding the vertebræ.

Take the trouble to make sure that there is nothing else on foot before you conclude that the pain is rheumatic. Examine the urine in every case and estimate the degree of urinary acidity.

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Now as to treatment of these faulty conditions of nutrition and elimination. In all cases of acidemia (a high degree of urinary acidity), I know of no remedy equal to the alkalis. I give these, with intestinal antiseptics, in hot or cold water two hours after each meal; this treatment in all cases of rheumatism, gout, neuritis, and so on, with high urinary acidity.

In chronic rheumatism, then, alkalis, laxative salines and, if bowels and liver are very inactive, my formula "calpiac," for a few days. Potassium iodide and iron iodide are both of service, according as the person is robust or asthenic. A favorite prescription of mine is, equal parts of a saturated solution of potassium iodide and the English wine of colchicum; and of this from 10 to 40 minims may be given well diluted with water after each meal.

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This general line of treatment in connection with our mud baths enables me to get good results here much sooner than I could in private practice.

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To return to my first thought. From every human being whose body has been racked by pain; from every human being who has suffered from accident or disease; from every human being drowned, burned or slain by negligence, there goes up a continually increasing cry, an awe-inspiring cry, which no one dares listen to, against which ears are stopped by the wax of superstition and the wax of criminal selfishness. These miseries could have been prevented. We can prevent them in the future.

All diseases are preventable; or, if not so, they can be so weakened as to do no harm. All accidents are preventable; there is not one that does not arise from folly or negligence.

All accidents are crimes. There is no necessity for any man to die except of old age. It is incontrovertible that at the present time no one ever dies of old age. No such thing as old age is known to us; we do not even know what old age would be like, because no one ever lives to it. Our bodies are full of unsuspected flaws, handed down, it may be, for thousands of years; and it is of these that we die, and not of natural decay. Till these are eliminated, or as nearly eliminated as possible, we shall never even know what true old age is like, nor what the true natural limit of human life is.

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Before our generation lie a list of great undertakings of the value and profit, of which for ourselves we cannot be sure at all. The labor is likely to be too long and too great. Our cities must largely be rebuilt and built better; overcrowding must cease; the children must all be brought, somehow, into wholesome touch with the soil. The land—naturally the greatest social instrument—must be freed of the selfishness and arbitrariness of individual control and somehow made to do its proper social service. The enormous advantages of the world's gain in power and wealth, through science and invention, must be more righteously distributed. The load of the military and naval armaments of rival nations, the survival of barbarous ages, must be lifted from the shoulders of the toiling peoples.

It is, one might say, as if the streets of a town were dug up for extensive improvements. While the great work goes on, the people who live in the street suffer inconvenience and expense. They must endure, in order that not merely themselves but others later may enjoy them more. Much of the labor of our generation may even seem to go out of sight, like foundations under the ground. It is given to man not alone to obey the law which the brute creation obeys without knowing it, it is also given to man to know the law and to will to obey it; that is, to choose it and be glad in it.

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If tuberculosis is known better today, it is the outcome of the work of many, and for centuries. If it is to be exterminated, it takes the sympathy and labor of more than one person, one society, one town, one country. It demands the cooperation of all and every one.

Your ear should be taught to listen to and know the dignity of moans and coughs and stifled cries. Your eye should behold intelligently and pityingly the shriveled skin of emaciation, the hungry look and the suppressed tears, your hand should know how to feel the pulse of him in the stricken, lowly dwelling and that of society besides. You should learn how the other four-fifths live and how they sicken and die.

The whole town, with its intercommunication of roads and railroads, street subways and elevated roads, cabs, stages, and sewers, is a network from which there is no escape. As sanitarian, public and private teachers, doctors and nurses, workmen and tradesmen, coachmen and butlers, cooks and maids, your grocery clerk who takes orders, your tailor who gives out your evening dress coat to be sewed and finished in the tenements full of infectious diseases, including consumption, your milliner and ladies' tailor and fashion dictatoress, from whose score of working-women you are only separated by a swinging door, the mail-carrier and expressman, conductor, and your neighbor in a car, the people from unknown parts, who, with their children, visit your help in your basement or are visited by them. All of them, while aiding and serving you, may prove your enemies as some of you to your friends.

All that was so before we ever knew what a germ was, and ever since, and will remain so unless we all stand together to learn and to prevent. Otherwise someone may bring to you and yours whooping-cough, measles, scarlet-fever, typhoid fever, and diphtheria, and more. Unless you help in fighting the antivaccination backwards movement inside and outside legislatures, the disciples of it will bring you, as they have done before, smallpox. You must take a firm stand against the social evil and combat with all your power the spread of venereal diseases.

These are some of the important problems for men today, and especially for the physician. It is his duty to teach the people how to live.

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Well, the good ship Time has put into port again to take on a new cargo of good resolutions, earnest resolves, and patented schemes, before setting sail for the shores of a distant future.

Do you never feel like calling out to the galloping years to come to a halt? This breakneck race of time is going to land us all too soon over the border, because we've not learned how to live and are handicapped by the ills and indiscretions of our ancestors.

For my part, I'd like to slow up for a while. It used to be a good long time from New

Years to New Years, but now it is like the dip of a swallow's wing or the shadow of a cloud. The seasons are constant, but they are in a greater hurry. Spring used to take off her things and sit awhile; now she only stops to throw a bunch of lilacs in at the window and flits away. Summer and autumn used to make themselves at home and linger long and pleasantly, but of late years the former weaves a garland, which is hardly finished before the latter breathes upon it and it drops to pieces. As for winter, he barely takes time to show us his wares of diamonds and ermine and laces before he is summoned back to the land of nowhere.

God bless us, every one! Where shall we be this time next year? This moment the something called "I" sits here with me, but where will it be tomorrow, next year, or when eternity, never begun and forever unending, is a billion ages on its course? Before this present day's completed span is run, it may exist no longer in all the spaces of the sentient earth; within a week, it may be laid away under the frozen turf; as the years drift by, it shall be as completely forgotten as the petals of Sappho's rose.

Where will it be gone? They can never bury it, however deep they dig its grave. Will it slip away, like a ray of light, to mirror itself, perhaps, within the translucent tide of eternal life, or lose itself with other sunsparkles in the fine radiance of illimitable ether? Who knows? I do not.

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As the years go on, how full they grow to be of ghosts. Who of us, after first youth, have failed to find our holidays and our anniversaries haunted by restless memories and sad associations that stalk like sheeted specters from the tomb? And when once the ghosts get to coming into our lives, oh, how fast they throng. We cannot take a journey, but they go with us. We cannot lie down to rest or rise to take up life's multiform duties, but they lie down and rise up with us. Only at the door of death shall we leave them and enter in, to find the better part of life in the shadowy land of dreams.

How needful, then, that our memories be pleasant ones. Let us resolve, then, with the new year, to do our best. Let us learn the extreme value of human life; let us strew it with flowers. Save every hour for the sunshine; let your labor be so ordered that in future times the loved ones may dwell longer with those who love them; open your minds; exalt your souls; widen the sympathies of your hearts; face the things that are now as you will face the reality of death; make joy real now to those you love, and help forward the joy to those yet to be born. Remember that death is not of old age, which no one living in the world has ever seen; remember that old age is possible, and perhaps even more than old age; and beyond these earthly things—what? None knows. But let us look earnestly and constantly for something better, seek for something higher, and lift our souls to be with the more than immortal now.

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This may be the last year of our work. The good deed we do today may be our last. The last time! Did you ever stop to think of it? It is coming, perhaps it has already come, and you did not know it. You have read the last journal, and closed the covers of the last book you shall ever read on earth. You have eased the sufferings of your last patient. You have looked for the last time into eyes that never failed to answer love with love. You have looked your last at sunset sky and morning's roseate flush of dawn. You have taken your last journey, written your last letter, eaten your last meal, slept your last sleep. The story is told; the play is ended; the lights are burning low; the music is hushed.

Yes, all this is possible; so, do not let the chance go by to be gentle, to be kind, to be honest, to be strong. Do not let love's opportunity go by unchallenged, remembering always that it may be the last you will ever know.

Remember, it is not always youth time, any more than it is always May; and grafts and shoots that grow readily in spring will take no root in bleak mid-winter. Cultivate your smiles and your simple services of love now, and old age shall be but an afternoon trellis hung deep with perfumed roses, as beautiful in the sunset glow as in the dawn.

Like an unwritten page, the new year lies before you in untrodden fields of shining snow. God grant the footsteps of Death be not the first to track the unbroken path that lies before you. May joy and peace and love, like the roots of the violets under the snow, quicken and blossom for all of you as the year advances, and may your progress be, like January's, right steadily onward into June!

Among the Books

THE PRACTITIONER'S VISITING LIST

This visiting list, which is published by Lea & Febiger, of Philadelphia and New York, is now in its thirtieth year of issue and has so well established its right to exist that no extended description of it is necessary.

Aside from the account-book section, it contains, among other valuable information, tables of weights and measures, instructions for examining the urine, a diagnostic table of eruptive fevers, directions for effecting artificial respiration, tables of dosage, and an alphabetical list of diseases and their remedies. It is made in weekly and monthly, and 30-patient and 60-patient sizes. The price of any one is $1.25, by mail, postpaid. Thumb-letter index, 25 cents extra.

MEDICAL RECORD VISITING LIST

This is another old standby among the visiting lists, published by William Wood & Co., of New York; but in this edition the amount of printed material useful in emergencies has been considerably increased. The most important change is in the list of remedies and their maximum dosage, now given in both apothecaries' and decimal systems, and the indications of such as are official in the United States. Of great value is the list of poisons and their antidotes. A novel feature is the short paper giving hints on the writing of wills.

This list is made in several styles; the one for 30 patients a week selling for $1.25, for 60 patients, $1.50, and 90 patients a week, $2.00. The doctor's name is stamped in gold upon the cover for 25 cents extra.

THE PHYSICIANS' PROTECTIVE ACCOUNTANT

One of the most generally useful pocket accountants for the use of the physician is The Physicians' Protective Accountant, published by The Abbott Alkaloidal Company; this consisting of twelve separate visiting list sections, one for each month in the year and a separate ledger for the transferring of accounts and a record of monthly balances.

This accountant has the advantage of being exceedingly simple, and conveniently adapted to the physician's pocket or satchel, while meeting all the requirements of the laws of the various states regarding the keeping of accounts. It is provided with a convenient leather cover.

The monthly record is so arranged that every patient's account is kept separately in a form most convenient for transfer to the ledger, the latter being simplicity itself. There are separate pages for the record of cash receipts and for obstetrical cases. The price for the complete outfit (twelve monthly sections, and ledger), is $2.50. We recommend this to the medical profession with confidence that physicians will find it most satisfactory in every way.

HUN: "ATLAS OF DIAGNOSIS OF NERVOUS DISEASES"

Atlas of the Differential Diagnosis of Diseases of the Nervous System. By Henry Hun, M. D., professor of neurology, Albany Medical College. Troy, N. Y.: The Southworth Company. 1913. Price $5.00.

Doctor Hun may felicitate himself upon having done for neurology the one thing above all others that neurology needed to have done. It is not often that a reviewer finds himself called upon to discuss a book—especially in medical literature—to which no words of praise that he is able to command seem adequate to do simple justice; and when he does, he is not backward about acknowledging it. Such is the feeling of the present reviewer in contemplation of this work of Doctor Hun's. It is no hyperbole to say that it is the dream of the neurologist come true.

Neurology is preeminently a schematic subject, to be taught and grasped only by diagrammatic methods. Yet, no writer has hitherto had the perspicuity and the daring to present it in purely diagrammatic fashion. Doctor Hun not only has had the perception and the courage to do this, but he has had the skill and the patience to do it thoroughly and well.

We have no hesitation in saying that this book is a master-piece or in predicting that it

will take its place among the classics of medical literature. The grasp of the subject which it implies on the author's part is profound; the amount of labor it must have entailed, colossal. We are the fortunate ones who enter into the fruits of his labor. The entire profession is under an everlasting debt of gratitude to Doctor Hun, which, if we mistake not, it will evince by a prompt and widespread adoption of his excellent work.

"PROGRESSIVE MEDICINE"

Progressive Medicine. A quarterly digest of progress in the medical and Surgical sciences. Edited by Hobart Amory Hare, M. D., and Leighton F. Appleman, M. D. Volume XV, Nos. 2 and 3. Philadelphia: Lea & Febiger. 1913.

The second and third volumes of this year's series of "Progressive Medicine" are in keeping with all the previous issues of the work. The literature on the various subjects is carefully reviewed, and abstracts, with comments thereon, are presented of the more important articles that have appeared during the period involved. This series of books affords a résumé of the progress of medical science that can be obtained in no other way, and is made by men who thoroughly appreciate the needs of the busy practitioner who, nevertheless, desires to be a student of current advance. The two volumes here under review contain digests of the following subjects: Diseases of the thorax, dermatology and syphilis, obstetrics, diseases of the nervous system, hernia, abdominal surgery, gynecology, diseases of the blood, ophthalmology.

DERCUM: "MENTAL DISEASES"

A Clinical Manual of Mental Diseases. By Francis X. Dercum, M. D., Ph. D., professor of nervous and mental diseases, Jefferson Medical College, Philadelphia. Philadelphia and London: W. B. Saunders & Co. 1913. Price $3.00.

The average medical man has no desire to become an expert in mental diseases. If he has, this book is not for him—he must consult a more exhaustive and monumental work. What the ordinary man wants is a simple, concise, practical exposition of the commoner phases of mental pathology and therapy, in terms of the rest of his knowledge and practice. The refinements of diagnosis and treatment are for the specialist. It is not necessary that the general physician be able to argue an elaborately detailed brief for the numerous psychic phases of mental disease; but he ought to be able to differentiate, intelligently and fundamentally, between the grosser manifestations of disordered mentality.

Doctor Dercum, in the book under review, has set forth for the general practitioner these commoner clinical phases of psychiatry. Indeed, he is the only writer on this side of the Atlantic who has succeeded in producing the first book on mental diseases of which, in our humble judgment, deals with the vexed subject in anything like an illuminating fashion.

The literature of alienism in Germany and America has shown a pernicious tendency toward confusion and incoherence. The English alienist alone seems to have kept his head. Doctor Dercum evidently has taken a leaf out of the Englishman's book and has set out with the avowed purpose of simplifying and unifying the subject—a purpose which he has carried out with admirable consistency. We heartily commend his work to those who are concerned with the diagnosis and treatment of mental defects.

FRIEDENWALD AND RUHRAEH: "DIET IN HEALTH AND DISEASE"

Diet in Health and Disease. By Julius Friedenwald, M. D., professor of gastroenterology in the College of Physicians and Surgeons, Baltimore; and John Ruhraeh, M. D., professor of diseases of children, in the same college. Fourth edition, revised and enlarged. Philadelphia and London: W. B. Saunders & Co. 1913. Price $5.50.

The influence of diet upon health and disease is receiving wider and wider recognition every year. There is, to be sure, plenty of room for expansion in our knowledge of this important subject; but, on the whole, it is growing about as fast as could be expected. The mere fact that we are recognizing the part played by diet in normal and abnormal physiology is a distinct advance over fifteen or twenty years ago, when physicians spoke and acted as if the food that one ate made no more difference to one's physical condition than did the way one did his hair.

Nowadays there is at least an attempt on the part of the conscientious doctor to make something like a scientific adjustment between diet and organism; and the attempt is becoming steadily more intelligent. That this is so, is due, for the most part, to the persistent and well-directed efforts of a few men, of whom the authors of this book are conspicuous examples, who not only have preached, in season and out of season, the

necessity of dietetic hygiene and treatment in health and disease, but have worked out a rational system of dietetics for practical use. The fourth edition of Friedenwald and Ruhraeh's book faithfully represents the present status of the subject, and its appearance sufficiently attests the popular appreciation of the authors' work.

ROEMER: "OPHTHALMOLOGY"

Textbook of Ophthalmology. By Dr. Paul Roemer, professor of ophthalmology at Greifswald (Germany). Translated by Dr. Matthias L. Foster. New York: The Rebman Company. 1913. Price $2.50.

This is another of those valuable translations of European classics to which The Rebman Company is treating the profession of this country. The second volume is devoted, for the most part, to those aspects of ophthalmology which have to do with general diagnosis. These aspects of the eye and its disorders are not appreciated by the general practitioner to anything like the extent that they should be. Perhaps the oculist, himself, and the writers on ophthalmology are somewhat responsible for this failure on the part of the physician to utilize the diagnostic findings of the ophthalmoscope and retinoscope. At all events, it is unquestionably the business of these specialists to call attention to the value of the eye as a general diagnostic medium and to stimulate its utilization for this purpose; and we are glad to see that Doctor Roemer gives a full quota of space and time and effort to disorders of the eye in relation to general diseases.

To those who know anything about these monograph publications of The Rebman Company it is unnecessary to say that this volume is a paragon of physical excellence and elegance — paper, type, illustrations, plates are all of the highest quality.

DAVIS: "OBSTETRIC NURSING"

Obstetric and Gynecologic Nursing. By Edward P. Davis, A. M., M. D., professor of obstetrics in Jefferson Medical College, Philadelphia. Fourth edition, thoroughly revised. Philadelphia and London: W. B. Saunders & Co. 1913. Price $1.75.

There is, perhaps, no department of medicine or surgery in which it is so desirable that the nurse be thoroughly trained and independently capable as obstetrics; for there is no other branch in which the physician relies so implicitly upon the nurse's intelligence and professional tact. Hence, it not only is desirable that she be thoroughly instructed in her duties, but that her instruction extend somewhat beyond the ordinary limits observed in the ethics of nursing. If there be any place where the knowledge and work of the physician and the nurse overlap each other, it is in the lying-in room.

Doctor Davis' manual recognizes and fully measures up to this necessity. It covers the ground with praiseworthy adequacy. Indeed, while it is written as a book for nurses, it should be almost as valuable to physicians, since it deals largely with the details of obstetrical technic. It expounds the practical, clinical aspects of childbirth, from the beginning of pregnancy until the dismissal of the case, including much of the physiology and anatomy of the subject.

Apparently, however, all that we might say in commendation of the book would be gratuitous and superfluous, for the fact that it has passed so rapidly into so many editions is evidence of its merit and popularity. Suffice to say that it furnishes just the quality of instruction that one would expect from a man of Doctor Davis' long experience and ripe judgment in the practice of obstetrics. What more could we say?

"REFERENCE HANDBOOK OF THE MEDICAL SCIENCES"

Reference Handbook of the Medical Sciences. Edited by Thomas Lathrop Stedman, A. M., M. D. Third edition, completely rewritten and revised. Vols. 1 and 2. New York: William Wood & Co. 1913. Price for complete 8 volumes, cloth, $56.00; leather, $64.00; half morocco, $72.00.

Naturally, every successive edition of this colossal work represents a larger amount of burdensome labor and the exercise of a nicer degree of editorial discrimination than the one which went before; for every year the mass of material to be handled grows bigger and the choice between transient and permanent values becomes harder. No doubt that is the reason why we have been kept waiting a little longer for the volumes of this third edition than we were in the case of the first and second.

So far as the volumes now at hand are concerned, the performance of the gigantic task leaves nothing to be desired. An enormous amount of altogether new information is incorporated into the revision, and, so far as we are able to judge, the selective faculty of the editor and compilers has been soundly

exercised. The only feature we should feel at all disposed to criticize is the title of the series, which is altogether inadequate to express its scope. It is, in fact, a veritable encyclopedia of medical sciences, and fulfils all that is customarily expected of a cyclopedia.

Possibly another tentative criticism might be made of the rather cumbersome physical proportions of the volumes. We offer the suggestion that some arrangement might be made whereby a supply of India paper could be obtained on which to print these books. Such a departure would greatly enhance their convenience and make them in every respect a triumph of modernity.

HONAN: "HEART-PATIENTS"

What Heart-Patients Should Know and Do. By James Henry Honan, M. D., of Rush Medical College. New York: Dodd Mead & Co. 1913. Price $1.20.

Every physician is agreed that the management of patients having a diseased heart resolves itself into a proper supervision and regulation of their hygienic regimen and their habits of living, and that the role of the medical man in such cases is that of an adviser and counseler in respect of this mode of life. But when he comes to put this principle into practice every physician does not, by any means, find himself possessed of the necessary data or experience for formulating rules of conduct for his patient. Such matters, indeed, can hardly be the fruit of any man's individual experience, since no one man, at least no one man in general practice, acquires sufficient experience to furnish him trustworthy guidance on the subject. These things must of necessity represent the net sum of the experience and observation of many men in many places at many times.

Here, in this little book, the author has gathered together and assembled in orderly, intelligent, usable fashion the conclusions of these various men and places and times, for the guidance of those who are confronted with the task of safely steering the feeble bark of the "heart-patient" through the precarious vicissitudes of daily living. The book is well and simply written. The physician, if he so desired, even could copy the author's preachment on the particular form of heart disease with which his patient is afflicted, just as it stands, and hand it to the patient as his living manual. At all events, it sets before the doctor, in clean-cut shape, just what he needs to tell his heart-patient, in just the way he needs to tell it.

MANQUAT: "PRINCIPLES OF THERAPEUTICS"

Principles of Therapeutics. By A. Manquat. Translated by M. Simbad-Gabriel, M. D., New York: D. Appleton & Co. 1910. Price $3.00.

In this work Dr. Manquat shows a beautiful appreciation of the importance and necessity of therapeutics, properly understood. Our readers will be able to form some idea of the author's conception by the perusal of the excerpt from his introductory remarks which we shall print in an early number of CLINICAL MEDICINE. The book is well worth buying and studying.

VON NOORDEN: "NEW ASPECTS OF DIABETES"

New Aspects of Diabetes: Pathology and Treatment. By Prof. Dr. Carl von Noorden, Professor of the First Medical Clinic, Vienna. Lectures delivered at the New York Post-Graduate Medical School, New York. New York: E. B. Treat & Co. 1912. Price $1.50.

Those of our readers who have carefully perused the articles by Dr. Wolverton upon diabetes which appeared in recent numbers of CLINICAL MEDICINE, are already pretty well familiar with the theories of Professor von Noorden relative to the pathogenesis and treatment of diabetes. It seems hardly necessary to say that in the working out of the problems connected with this disease, von Noorden probably stands at the head of the long list of earnest investigators. From the American point of view, the feature of his work which has peculiar interest is that it is distinctly practical. He has the rare faculty of connecting pathology with therapy, and this is a characteristic which we in America value most highly.

Should we attempt to give the central idea in von Noorden's work upon diabetes, it would be the emphasis which he places upon the importance of the liver as a factor in sugar formation and control, but the space is too short to give in detail the fascinating outline of treatment of the subject in this interesting book. We urge every reader of CLINICAL MEDICINE to purchase a copy and read it carefully Not only will he understand diabetes better, but he will treat it more successfully.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

QUERY 5963.—"Diabetes Insipidus." E. W. D., Arkansas, asks us to name the "best remedy" for diabetes insipidus.

Diabetes may be caused by severe nervous or physical shock or by injury; by lesions of the fourth ventricle; paralysis of the sixth nerve; following acute infectious disease or the prolonged use of alcoholic beverages. Sometimes it seems to be owing to hereditary influence.

Modern clinicians are inclined to regard the disease as a vasomotor neurosis, and unless it follows shock or alcoholism the onset is gradual. Neurasthenia, insomnia, and chorea are frequent complications and have even been regarded as causative. Frequent and thorough examinations of the urine should be made.

On general principles, it is well to restrict the amount of fluid consumed. A rigid personal hygiene should be instituted. Coniine, hyoscyamine, and monobromated camphor, in moderate doses four times a day, may prove beneficial; or zinc valerate may be pushed to effect. Arbutin nearly always is of service, this drug exerting a continuous action upon the urinary tract, 1-3 to 1 grain, or even larger quantities, given three times daily, being the average dosage; strychnine, 1-64 grain, may be added.

Should this treatment prove ineffective, alternate arsenic iodide and arsenic bromide (gr. 1-64) after each meal, week and week about. With the arbutin, give hydrastoid and juglandoid, of each 1-6 grain. After using arsenic for two or three weeks, substitute ergotoid, 1-3 grain, for an equal period; then return to the arsenic. In extremely rebellious cases, pilocarpine may be given in sufficient dose to cause diaphoresis.

If you will give us a clear idea of the conditions present in any particular case under observation, we shall be pleased to try to prescribe more intelligently.

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QUERY 5964.—"Vomiting of 'Black Fluid' by Newborn Infant." E. C. J., Iowa, had a very peculiar case a few days ago and asks whether we or any brother practitioner can enlighten him on the subject.

Woman, age 32 years, mother of one child born three years ago. That delivery was difficult, but health has since been good.

This woman was delivered again recently of a 10-pound boy. When the membranes ruptured a black, flaky fluid flowed out, and it was regarded as meconium mixed in the amniotic liquor. The position of the head was L. O. A.; delivery slow but natural.

When the head was born about an ounce of black fluid issued from the child's mouth and nose. "Was that," the doctor wonders, "liquor amnii or was it a case of reversed peristalsis? I never saw anything like it before and do not find such an occurrence mentioned in any of my textbooks. Mother and baby are all right now."

We must confess that the problem you present is not easily solved. It is unfortunate that you did not have a specimen of the "black fluid" examined microscopically. We can only assume that meconium in the amniotic liquor entered the child's stomach or buccal cavity and was regurgitated as the head was delivered. As you know, analysis has shown that the stomach and intestines of the fetus contain, in addition to bile-pigments and salts, a considerable amount of mucin, vernix caseosa, and epidermal cells, thus confirming the opinion held by so many physicians that the amniotic liquor is swallowed at intervals by the fetus.

It is just possible, of course, that hemorrhage may have occurred in some part of the digestive tract of the fetus. Naturally, the blood would be considerably changed in the fetal stomach, and pressure may have caused the expulsion of the substance; but it is rather probable, as the child represented no abnormalities, that you had to deal with a heavy deposit of meconium in the liquor amnii, a portion of which, in some manner not quite explainable, found its way into the stomach or mouth and nares of the child.

It must be remembered that the amniotic liquor may become very black in color and

more or less turbid. While its exact origin is still a matter of doubt, it is probable, however, that it is really derived from maternal and fetal sources. It frequently contains the secretion of the fetal kidneys.

Despite the fact that it would seem to be physically impossible for the fetus to swallow before it breathes, it now is generally believed that considerable quantities of the liquor amnii enter the stomach during the later months of pregnancy.

From your description, we can hardly believe that the child suffered from melena. Ordinarily, in such cases, the vomiting of black matter (altered blood) is succeeded by the evacuation of feces of the same character.

You state that the labor was difficult, and one of the main evidences that the fetus is in distress is the coming away of meconium. Should this come away mixed with the liquor amnii, it shows that the fetus was in distress during the early stages of delivery. When meconium comes away unmixed with the liquor amnii, during the second stage—obviously freshly voided—distress is recent.

Under the circumstances, doctor, we believe that, owing to some abnormality—faulty position, unequal uterine pressure, etc.—the meconium was voided before dilatation had advanced to any extent and later, mixed with liquor amnii, found its way into the mouth or even the stomach of the child. As soon as pressure was removed and with the first attempt at respiration, the fluid was ejected—some of it by way of the nose.

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QUERY 5965.—"Gastric Ulcer or Carcinoma?" F. B. S., Illinois, forwards gastric contents and somewhat limited clinical data, and requests diagnostic and therapeutic suggestions.

Examination of the specimen revealed the presence of free and combined hydrochloric acid, a moderate quantity of lactic acid, traces of peptone and pepsin, with a very few streptococci and a few saprophytes. Pus and blood were absent.

The patient gives a history of continuous pain in the epigastric region since June—which at first was more general, especially in the region of the descending colon. He first came under the correspondent's observation about four weeks ago. There was tenderness in the epigastric region, very pronounced in a small localized area just below the sternum in the median line; and marked pulsation of the abdominal aorta; while auscultation revealed blowing sound in this region. No vomiting, no palpable tumor; pain after eating; good appetite; loss of weight (about 25 pounds); has gained 5 pounds under treatment. Malignancy suspected.

We regret that you did not give us some idea of the patient's age, and clearer clinical data generally. You say that there is a history of continuous pain in the epigastric region since June; "pain at the beginning in the region of the ascending colon." Further on you say, "Pain after eating; no palpable tumor; physical examination reveals only tenderness in the epigastric region." Do you mean tender feeling on deep pressure?

In gastric ulcer, as of course you are aware, epigastric pain is increased by pressure; the sensitive point usually is circumscribed; pain occurs generally a few minutes after eating, though sometimes one-half to one hour later, and persists during digestion. After a few weeks, in the majority of cases, dorsal pain begins, which is of a gnawing character, and is felt to the left of the spine, between the eighth and tenth vertebræ. Sometimes dorsal and epigastric pain alternate. At the first there is but a feeling of fulness and of pressure after eating, this gradually increasing to pain immediately below the sternum. Sometimes this pain is so severe, the patient is afraid to eat, though the appetite is good. Nausea, regurgitation or vomiting may occur early, or perhaps not until later. If there is no hematemesis, occult blood frequently will be found in the stools, and the latter should always be examined.

Do not forget that, while hyperchlorhydria exists in a great majority of cases, there also may be subacidity.

Ulcer of the stomach usually occurs in patients between the ages of twenty and fifty, being more often observed in women. Cancer makes its appearance in middle age and advanced life, and is met with more often in men.

In ulcer of the stomach, epigastric pain is intense, appears shortly after meals, is increased by pressure. There may be free periods during the day; dorsal pain is present; sooner or later the tongue is dry, red, and clean, or moist and smooth, with a light fur; there is no abnormality of taste; belching is absent, as a rule, but if present no odor is observed.

In cancer, pain is decidedly less intense, but continuous, and there is marked local tenderness; dorsal pain is absent; the appetite is poor; the tongue is thickly coated; there is a bitter or sour taste in the mouth;

belching is frequent, the regurgitated gas possessing a disagreeable or fetid odor.

It may be necessary to make several examinations of the stomach contents in order to arrive at a definite diagnosis in this case.

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QUERY 5966.—"Peculiar and Fatal Abnormality of the Cord." W. V. T., Kansas, in April, 1911, attended a primipara aged twenty-seven years, of average stature and in excellent health. (The husband, also twenty-seven years of age, was in good health and of excellent habits.) No venereal taint in either. Fetal movements had been absent for four or five days. The labor was rather protracted, although not complicated, and terminated naturally. The infant, which weighed eight or nine pounds, was dead. There was no pulsation in the cord, which was dark and almost gangrenous. The mother's recovery was uneventful.

The Doctor attended the same lady September 16, 1913. He arrived at about 10 p. m. on the 15th. Found the os dilated to the size of a silver half-dollar, pains rather spasmodic, otherwise normal. At midnight he gave a hypodermic of hyoscine-morphine. Pains continued at normal intervals and were vigorous, the mother sometimes dozing between pains. The presentation was normal, being left occipito-anterior. The child was born at about 4 a. m. on the 16th. Following vigorous spanks upon the buttocks, the child would take an inspiration, but no further efforts at respiration would be made for several seconds. At one time it made a slight effort to cry. Hot and cold water (plunging alternately), artificial respiration and mouth to mouth insufflation failed to resuscitate the child, which was a girl, well matured and seemed normally developed, weighing eight pounds. It showed only slight lividity. After working with the child some time, the cord was hurriedly ligated in one place and severed. After all was over, the Doctor noticed that the umbilical end of the cord was black, but could not see that the placental end deviated any from normal.

We must confess that it is impossible for us to venture a definite opinion as to the cause of the suspended—or the lack of—animation in the child born September 16. As, however, an abnormal (possibly gangrenous) condition of the cord obtained in the first instance, while you observed "a darkened area about the umbilical end of the funis" of the child born subsequently, it is probable that death in each case was due to some circulatory abnormality. In certain cases, it would seem, the mother may be able to furnish the fetus with the necessary amount of oxygen and nutriment until almost the termination of pregnancy, then suddenly becomes unable to do so.

Had death in each case occurred a few days prior to delivery, we should have to consider the possibility of maternal or paternal syphilis, maternal anemia or tuberculosis, or some inflammatory condition of the uterus. As, however, intrauterine death occurred in the first instance, and the second child, when born, showed some signs of life, we are confronted with a somewhat more difficult problem. It is true that the death of the first child occurred only three or four days prior to term. Precisely the same conditions may, therefore, have existed in each instance. Had the delivery of the second child been delayed even a few days, its death in the womb also probably would have occurred.

As each child was fully developed and the mother shows no sign of nephritis, diabetes or any serious systemic disease, we cannot reasonably suppose that the death was due to the prolonged absorption of maternal poison; neither can we reasonably assume any gross pathological condition of the ovum or placenta. It is true, that in the first case labor was somewhat prolonged, but, as fetal movements had ceased for four or five days, it is reasonable to assume that the child had been dead for that length of time. We must, therefore, exclude pressure (upon the cord) during labor.

In the second case, labor was neither prolonged nor difficult, and we must assume, of course, that there was no pressure upon the cord here either. The discolored area about the umbilical end of the funis of the child born alive and the extensive discoloration of the cord of the child born dead points directly towards *late* changes in the umbilical vessels, with obstruction of the fetal circulation.

It is to be regretted that the placenta and cord were not thoroughly examined; also, a postmortem might have revealed abnormality of the fetal heart. We need not tell you that as the fetus approaches term slight narrowing of the foramen ovale and ductus arteriosis takes place, preparatory to the establishment of pulmonary and systemic circuits; while immediately after delivery still more important changes occur. The possibility of placental infarction must not be lost sight of.

Everything considered, we must assume that death in each instance was due to direct obstruction of the circulation (premature

closure of the funic vessels) or to imperfect oxygenation of the blood, the fundamental cause in either case being, perhaps, some peculiar toxin in the maternal blood.

As to any effect the one tablet of hyoscinemorphine administered may have had, this may entirely be disregarded, we think.

We have submitted this query and our reply to Dr. William Rittenhouse, and he comments as follows:

"I have carefully read Doctor Tucker's description of his case and your reply to his letter, and on due reflection I do not see that I can add anything to what you have so well said. In the absence of an autopsy in both cases, it is impossible to do more than speculate on the true nature of the conditions. I do not think that the sedative had anything to do with the result in the latter case."

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QUERY 5967.—"Angioma." J. M. I., Indiana, has a patient eleven months old who presents what appears to be a small angioma on the upper lip. It is raised, dusky-red and compressible. The parents have taken the child to several doctors and "the blood has been drawn" from the tumor by one of them; however, it returned in a few minutes. Our correspondent wishes to know whether cutting the capsule and tying off any bleeding points (enucleation) would prove curative; or whether carbon-dioxide snow would be of any value? If thiosinamine would aid, should it be injected at the site of the tumor? He has thought of using pure phenol, followed by alcohol, but is not sure of its effects on one so young.

A small angiomatous growth may be destroyed by the electrocautery or by carbon-dioxide snow, but probably the best procedure would be enucleation. The operation is comparatively easy, and healing can be secured without an objectionable scar. It must be borne in mind, though, that frequently there is a comparatively large vessel at the extreme base of the tumor, whence it is desirable to dissect out the angioma and place a ligature around the base before finally separating the mass.

Angioma cavernosum rarely is congenital and it arises mostly in the first year of life from some insignificant trauma. It is soft, protruding or hemispheric, and turgescent; sometimes distinctly encapsulated.

A vascular nevus, angioma simplex, consists of a red, bluish or purplish-red, slightly elevated area. It is readily compressible; the surface is either smooth or irregular and lumpy. The lesions vary in size from that of a bean to an area as large as the palm of the hand. Anything which disturbs or impedes the circulation of the part leads to temporary increased prominence.

A small superficial angioma may be destroyed by means of electrolysis, pressure or puncturing with a needle or sharp stick dipped in nitric acid. Puncture and pressure combined works satisfactorily in many instances. A triangular needle is introduced in several places over the growth and the tissues are then broken up; immediately thereafter several coatings of collodion are applied. Thiosinamine could not be used and phenol should not be.

As a rule, after a child is three or four months old, angioma has become permanently established and energetic measures are necessary. In this particular case, excision undoubtedly will prove most satisfactory.

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QUERY 5968.—C. M. D., Ohio, describes two cases that have been bothering him for a long time and asks for help.

Case 1.—A man thirty-five years old leads an active life, is well developed and healthy; his past history is absolutely negative; never had any venereal disease of any kind and nothing except the ordinary diseases of childhood. He complains of the necessity of frequent urination—about every three hours during the day, and has to get up on an average twice each night. The urine is normal in every respect. Physical examination is absolutely negative. He otherwise seems in perfect health. This condition has obtained a number of years, but he has been getting a little worse the past year or two. Feels no pains on urination. He says that when he gets up at night he voids sometimes a fairly large amount, at other times very little. The amount passed during twenty-four hours is about normal.

Many different drugs have been administered, but none of them seem to alter the condition in the slightest. Diuretics, of course, increase the amount of the urine and make him urinate more frequently.

We are inclined to think that you have to do here with some prostatic hypertrophy. Examine the man's gland and at the same time ascertain whether there is any tenderness in the deep urethra. The passage of cold (iced) steel sounds often proves beneficial in such cases (provided there is no prostatic infection) while a few doses of arbutin, hydrastis, and hyoscyamine may be administered, in the expectation of prompt disap-

pearance of all symptoms. Suppositories may be used with advantage.

Case 2.—Young man of about twenty. Complains of very frequent urination—about every hour during the day, and gets up from one to five times during the night. The 24-hour amount is somewhat in excess of normal. The urine is alkaline in reaction, but otherwise normal. The correction of alkalinity seemed to cause no improvement. Various cystitis remedies, diuretics, hyoscyamine, atropine, strychnine, and several other drugs have been given without any effect. He seems to improve for a day or so and then the same old condition returns. The patient has had more or less trouble in this respect ever since he was a child, being troubled with enuresis at that time. Otherwise his history is negative and he is, apparently, in good health.

If a file of CLINICAL MEDICINE is available, read our answer to Query 5538 on enuresis diurna et nocturna. However, as you are aware, an essential polyuria sometimes seems to exist; this condition having also been described as "polyuric diabetes." It is necessary to distinguish carefully polyuria (in which the amount of urine exceeds 2 liters in twenty-four hours) from undue frequency of urination, the latter frequently existing with a normal output of urine.

Some individuals of the neurotic type, or rather suffering from nerve-instability, present a socalled "nervous polyuria."

It has been claimed that the moderate type indicates disorder of the renal organs; the more marked polyuria evidences systemic disorder, that is, either diabetes mellitus or insipidus.

The more moderate forms may be observed in: (1) hysteria, epilepsy, exophthalmos or as a reflex from mental strain, sciatica, sclerosis of the cord, etc.; (2) cirrhosis of the liver; (3) various cardiac disorders, especially cardiosclerosis; (4) renal diseases—a simple congestion of the kidney; (5) uricacidemia—nitrogenous diabetes; (6) phosphaturia—phosphatic diabetes. The more marked forms may be observed in glycosuria and diabetes insipidus.

In every case, even if interstitial nephritis and amyloid kidney have been excluded, there may be trouble further down; therefore, urethra, bladder, and prostate gland should be examined. It may be necessary to use the cystoscope to ascertain the integrity of the ureters.

We are inclined to think that this patient (No. 2) has a marked chronic cystitis. In such cases, the possibility of ascending infection must not be lost sight of.

We should like to examine the urine of both patients.

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QUERY 5969.—"Polyneuritis." R. M. J., Tennessee, requests advice relative to a case now under his care. The patient is a married woman, about thirty years of age, having one child, age ten. Family history not good, several uncles and aunts having died of consumption. Her health up to twelve months ago was reasonably fair. Menstrual function always was normal, and now is so. According to her statements, her trouble began with something like a mild attack of rheumatism, affecting both the upper and the lower extremities, especially the hands and forearms; this being accompanied with a pronounced general weakness and a moderate smothering sensation.

In June last she had some swelling and soreness of both upper and lower extremities, reaching to knees and elbows; not confined to the joints, which were a little stiffened, but not enlarged. Her hands when cool or dropped by her side would soon assume a deep reddish-purple color, especially the palmar surfaces, but the color would disappear when her hands were elevated. There were no skin lesions; she had no temperature. However, she had a constant slight headache; the tongue was coated; digestion was bad; she was constipated; had no appetite; her heart action was irregular, with shortness of breath at times.

Under treatment she gradually improved, and for the two last months her tongue has been clean, appetite and digestion good, bowels regular, no headache, heart action regular, the "lub-tub" distinct although slightly masked by a peculiar rushing sound, no swelling of the extremities. She sleeps well on either side.

She has gained but little or none in strength or flesh. The muscular and joint soreness has extended to shoulders and hips, with a peculiar tension of the skin, which, she says, feels as if it would split when she moves. The purple discoloration has extended, deepened and become permanent. Her face has a curious drawn but not pinched expression, and white marks follow finger pressure, showing capillary stasis. Instead of swelling, she now has marked atrophy of the extremities and very pronounced muscular soreness and loss of joint action. Her fingers feel like sticks of wood. She is a woman of more than ordinary sense and has at no time been

affected by menta aberration; is bright and cheerful.

"My diagnosis," the Doctor writes, "was, structural disease of the right heart, of rheumatic origin; that the shortness of breath and swollen extremities were caused by disturbed compensation; that the compensation was restored by hypertrophy (heart now enlarged), with consequent disappearance of swelling and dyspnea. My prognosis is, dilatation of heart, and death. I cannot understand, though, the muscular atrophy and the profound capillary stasis. There are not sufficient cardiac symptoms to explain the pronounced capillary sluggishness. Taken as a whole, I have never seen anything similar to this case during an active practice of thirty-seven years."

While undoubtedly there is some cardiac involvement, you also are dealing with a distinct multiple, or poly-, neuritis. In this condition, as you are aware, the disseminated inflammation or degeneration of the nerves is symmetrical in its distribution on both sides of the body, generally affecting all the nerves of the limbs, particularly their terminal branches. The affection rarely, if ever, extends as high as the nerve centers; hence, affections of the functions of micturition and defecation do not occur; girdle sensation rarely is mentioned; also bed-sores and cystitis do not occur.

In neuritis, the advance is not like that in myelitis; namely, from legs to thighs, and from thighs to trunk; but, as already stated, the disorder remains in the legs and forearms simultaneously or nearly so, and does not invade the trunk.

In myelitis, we have marked sensory disturbance and anesthesia; and the areas are not glove-shaped or stocking-shaped as in this case with gradual ascension on the outer side of the limbs.

A "stick-like" condition of the fingers almost invariably develops sooner or later; such anesthesia being first observed in the hands and feet, then in the forearms and legs, but rarely reaching as high as the shoulders or thighs. The wasting of the muscles is readily accounted for under the circumstances; and, in contradistinction to the condition that would obtain in a marked cardiac lesion, you had a primary edema, which disappeared, to be succeeded by the wasting of the muscles. Were you dealing with a heart lesion *only*, edema of the extremities would be progressive and a terminal symptom.

The real cause in this case may never be definitely discovered. Rheumatism, socalled, gout (acidemia), diabetes, anemia (general malnutrition) or local malnutrition, produced by arteriosclerosis, must be considered.

Is it possible that the patient has received arsenic for a prolonged period or has she been addicted to the use of mercurials or coal-tar products, headache powders and the like?

The deep and superficial reflexes should be tested, and the urine examined carefully. It might be well also to send a blood smear to a competent pathologist for examination. Is there any enlargement of the spleen?

If a modern work on organic and functional nervous diseases or even a good work on practice is available, read the chapter on multiple neuritis. With the light so given, make another minute examination of your patient, and you will, we think, coincide with our diagnosis.

Naturally, medication, to be effective, will have to be based upon a clearer conception of the underlying pathology. Elimination must be maintained and the patient placed upon a milk or peptonized-milk diet, or, better still, properly prepared buttermilk.

If there is any malarial infection, quinine must be given. This is useless, of course, in nonmalarial cases. We have had excellent results from the phosphates of calcium, iron, potassium, and magnesium, with strychnine and arsenic. Massage of the affected extremities, warm epsom-salt sponge-baths, and the correct use of electrical currents will, naturally, prove beneficial. Proper manipulation of the limbs will increase the circulation, such increase of circulation bringing a fresh supply of reparative material to the nerve and aiding in nutrition of the muscles, which otherwise are decidedly affected by the sluggish flow of venous blood and generally reduced functional activity.

As soon, therefore, as muscular tenderness has sufficiently subsided, active massage should be employed. Do not forget that warm baths, packs, and hot douches stimulate the circulation materially and should be used daily; or, if the pack be given at night, will exert, not only a local action, but help to secure a quiet night's sleep.